

# DOWNTOWN INFRASTRUCTURE ASSESSMENT, STREETSCAPE ENHANCEMENT & REHABILITATION PROJECT

## FINAL DESIGN RECOMMENDATION REPORT





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# EXECUTIVE SUMMARY

## *Introduction*

The Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project seeks to implement a portion of the City of Grande Prairie's Downtown Enhancement Area Redevelopment Plan. The purpose of this report is to provide Grande Prairie City Council and Staff with a recommendation based on the findings of the Project. There were five discrete stages to this work, as follows:

- **Phase 1** - Infrastructure Assessment
- **Phase 2** - Council Visioning Workshop
- **Phase 3** - Conceptual Visioning & Preliminary Costing
- **Phase 4** - Engaging Council, the Downtown Association & the Public on Critical Infrastructure
- **Phase 5** - Engaging Council, the Downtown Association & the Public on Non-Critical Infrastructure (Streetscape Enhancements)

## *Subsurface Utility Assessment*

Of the three deep utilities, the sanitary sewer is considered to be past its serviceable life and full replacement is recommended. In most locations, the capacity of the potable water system is considered adequate for current development densities, however, sizing to accommodate future resiliency and capacity is not anticipated to have a significant effect on pricing, and is included in the contingencies. The storm sewer investigations suggest that sections of 99th Avenue from 102nd Street to 101st Street, and 101st Street from 99th Avenue to 98th Avenue are at, or near, the end of their functional lifespan and should be replaced.

It is recommended that in areas where any utility and/or surface infrastructure is being replaced, all three deep utilities should be designed and constructed to maximize the long term capital and operational cost effectiveness.

## *Surface Infrastructure Assessment*

The majority of downtown roadways can remain serviceable through continued maintenance, such as yearly crack sealing, spray patch, or asphaltic patch and pothole repairs, however some would require an

overlay or mill and inlay pavement rehabilitation **if** subsurface work is not required in the near to medium term future.

The areas of roadway (and curb and gutter) with the most severe conditions based upon visual and PQI assessment include:

- 100th Ave between 96th & 102nd St
- 101st Ave between 98th & 99th St and between 102nd St & west boundary
- 99th St between 100th Ave & Montrose College/Provincial Building
- 100th St between 96th & 103rd Ave
- 102nd St between 98th & 99th Ave and between 102nd & 103rd Ave

And for sidewalk:

- 99th St between 100th Ave & Montrose College/Provincial Building

It is recognized that either the roadway reconstruction or the need to upgrade the subsurface infrastructure will trigger the need to upgrade the other.

Additionally, it is suggested that a downtown mobility/transportation assessment plan be conducted as part of the streetscape enhancement implementation plan, further to the Community Mobility Plan that was recently completed.

## *Revisiting the Couplet*

In light of the current work on the downtown streetscape enhancement project, Council made a request to revisit the couplet project and discuss whether it would benefit the enhancement of the downtown. Four Grande Prairie couplet scenarios were compared in terms of their impacts on design, parking, traffic congestion, business exposure, pedestrian experience, safety, cost, and long-term solutions.

## *Community Engagement*

Engagement for the Grande Prairie streetscape design began with a visioning workshop held with Council, City Staff, and the Downtown Association. The purpose of this workshop was two-fold. Firstly, it

was to gain a greater understanding of the downtown (what works, what is missing, what are the opportunities). The second purpose was to understand how to define the success of a new downtown streetscape from Council's, Staff's, and the Downtown Association's point of view. These discussions provided the design team with the information they needed to draft preliminary streetscape options.

These preliminary streetscape options informed the discussion at the second Council, Staff, and Downtown Association workshops. Five options were presented and Councillors, as well as Downtown Association members, were asked to rate each option against a scorecard. These preferred options then informed the wider public engagement strategy.

The public engagement process took the form of a survey available both online and in-person from December 8, 2014 to January 16, 2015. This survey had a total of 1,301 participants who were asked:

- **Their vision for the downtown** - Key themes from this question include commercial businesses, urban design, and transportation.
- **Their priorities for the downtown** - The top three priorities were safety, convenience to get downtown, and ease of walking.
- **Their preferred streetscape option** - The majority of respondents chose a shared festival street as their preferred option, largely for urban design, transportation, and community reasons.

## Urban Design Recommendations

### VISION

*As the metropolitan heart of the city, downtown Grande Prairie will be a modern reflection of urban spirit and cultural vitality. Through unique and adaptive urban design, the downtown streetscapes will attract growth and support year round activity, promoting a sense of civic pride.*

Tied to the above vision are seven broad streetscape enhancement goals that will inform the design framework for the downtown: Urban; Modern; Unique; Attractive; Walkable; Cultural; and Active. In order to realize the vision and streetscape goals, objectives, informed by themes identified throughout the engagement processes, are proposed, as follows:

- **Identity** - To enhance an active and vibrant downtown destination that embraces the culture of Grande Prairie.

- **Mobility** - To support the complete streets model, emphasizing pedestrian accessibility, transit supportive design, convenient parking, and opportunities for cycling infrastructure.
- **Safety** - To achieve safety for pedestrians, vehicles, and cyclists throughout the downtown enhancement area.
- **Urban Design** - To establish a cohesive design language through coordinated and complementary streetscape elements.
- **Economy** - To enhance the economic vitality of the downtown by attracting a mix of businesses that serve a wide variety of people.
- **Landscape** - To provide for sustainable landscape treatments that complement the character of downtown streets and result in their distinctive identity.
- **Architecture** - To promote high quality architecture and redevelopment opportunities.
- **Seasonality** - To incorporate flexible design solutions into the streetscape to accommodate a range of functions and activities that can vary throughout the seasons.
- **Maintenance** - To ensure ease of year round maintenance through the use of appropriate streetscape materials.

### LAND USE & INTENSIFICATION

A theoretical investigation of downtown intensification and parking was conducted, which yields the following high-level recommendations that are worthy of future study:

- Consider establishing policies to encourage and/or incentivize future downtown redevelopment.
- Consider undertaking a downtown parking study to determine feasibility and potential locations of future city owned parkades.
- Work with the development and real estate industry to determine collaborative opportunities for increasing densities.
- Verify that infrastructure improvements are consistent with the most probable timelines and densities for intensification.

### DOWNTOWN ROAD UPGRADES

A hierarchy is proposed that defines each of the road ROWs within the downtown through the application of distinctive streetscape treatments, tied together by an over-arching theme and modern material palette. The following recommendations are provided:

- As part of the streetscape upgrades, implement a hierarchy for road ROWs within designated zones.
- Complete a cycling study to establish demand for, and feasibility of, a dedicated cycling network throughout the city.

- As redevelopment occurs, encourage the expansion of public realm in key areas by gaining back ROW from developers through purchase or height/density trade-offs.

## CREATING A CULTURAL LANDSCAPE

The cultural elements that make up the proposed streetscape kit of parts are representations of Grande Prairie's past, present, and future. The following broad recommendations are proposed to lead the city and local stakeholders into the detailed design process:

- Apply a material palette of stainless steel, corten steel, wood, concrete, and polycarbonate panels to modernize the downtown, while at the same time reflecting Grande Prairie's heritage.
- Adopt a unified kit of parts comprising lighting, street furniture, planting, paving, and transitional components to be applied to designated zones within the downtown.
- Support the detailed design of the kit of parts features, as well as various upgrade opportunities, such as gateways, intersection upgrades, and mid-block crossings / gathering spaces.

## WINTER CITY RECOMMENDATIONS

Due to Grande Prairie's northern climate, its downtown must be able to function as an all-season environment. To address this reality, winter city recommendations are provided in the following categories:

- Year-round Activity
- Snow & Ice Removal
- Pedestrian Circulation
- Vegetation
- Materials
- Future Development

## Capital Costing Estimates

The overall budget for the project is approximately \$131,500,000, including approximately \$100,000,000 in capital costs, and the remainder in fees for design, testing, and contingency. In the 2015 budget, Council has approved \$20,000,000 for the next four years to complete four phases of the work. Costs are broken into four distinct categories, as follows:

- Demolition
- Roadway
- Utilities
- Streetscape Elements

## Phasing Recommendations

Council's approved budget will allow four \$5,000,000 phases of work to be completed. During the final workshop, Council discussed potential phasing strategies with two options arising, as follows:

### Option 1: Main Street Focus

1. 101st St
2. West side of 100th Ave
3. West side of 101st Ave
4. Continue along 100th Ave or examine private incentives for the funds

### Option 2: Shared Festival Street Focus

1. 101st St
2. West side of 101st Ave
3. West side of 100th Ave
4. Continue along 100th Ave or examine private incentives for the funds

## Council Decision

On April 20, 2015, the Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project Final Recommendation Report was approved by Council with the direction to proceed with Phasing Option 2 (Shared Festival Street) on 101st Avenue.

The project will commence Phase 1 to coincide with Aquatera's planned replacement of the 101st Street sanitary trunk. Phase 2 will include the construction of a portion of the Shared Festival Street on 101st Avenue, from 102nd Street to 100th Street. Phase 3 will include enhancements on 100th Avenue, from 102nd Street to 100th Street, and Phase 4 will include either the continuation of the 100th Avenue enhancements or the reallocation of funds to spur the intensification of key downtown areas.

In response to the "Revisiting the Couplet" discussion and alternative scenario comparison, Council confirmed that the 101st Avenue couplet will not be constructed.



# 1.0 INTRODUCTION

## 1.1 Study Area & Background

The City of Grande Prairie is a growing community that is experiencing significant change, which has contributed to the need for a land use and development strategy in the downtown core. In 2004, City Council adopted Bylaw C-1130, the Downtown Enhancement Area Redevelopment Plan (DEP). The boundary of the Plan area is identified in Figure 1.

The DEP functions as the overall city policy guide for land use and development activity in the downtown core. It is intended to offer new policies and guidelines to channel growth in a manner that maintains the vitality of the downtown in the context of changing trends.

The Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project seeks to implement a portion of the City of Grande Prairie's DEP. The project scope includes subsurface and surface infrastructure assessments, upgrade recommendations, and streetscape design proposals for the downtown plan area. The work will provide an over-arching theme that will be used for the downtown as a whole.



Figure 1: Grande Prairie Downtown Context (NTS)

## 1.2 Terms of Reference

The purpose of this document is to provide Grande Prairie City Council and Staff with a recommendation report based on the findings of the Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project. There were five discrete stages to this work, as shown in Figure 2 and described below:

### Phase 1: Infrastructure Assessment

Consisting of Phase 1A: Subsurface Infrastructure Assessment and Phase 1B: Surface Infrastructure Assessment, this foundational phase considered the current condition of infrastructure and discussed options and alternatives for replacement.

### Phase 2: Council Visioning Workshop

Phase 2 presented the findings of Phase 1, and explored options and alternatives for the replacement or rehabilitation of infrastructure with City Administration and Council.

### Phase 3: Conceptual Visioning and Preliminary Costing

From the visioning workshops and Council engagement sessions, the team considered schematic design strategies and global costing exercises to distill the results of Phase 1 and 2 into a first-cut at determining a hierarchy.

### Phase 4: Engaging Council, the Downtown Association, and the Public on Critical Infrastructure

At the end of Phase 3, the team had a clear idea of the required infrastructure upgrades, and reviewed possible growth strategies and 'future-proofing' for utility upgrades that would have a lifespan upwards of 80 years.

### Phase 5: Engaging Council, the Downtown Association, and the Public on Non-Critical Infrastructure (Streetscape Enhancements)

It was time to take to the streets with an iterative design-engage-refine process that progressively elaborated on the work throughout the process, with the key stakeholders and the city. A vision for the downtown study area, as well as smaller precincts in the area, were explored, the results graphically presented, and the stakeholder process continued. With nearly 1,200 unique stakeholders engaging in the process through workshops, online engagement, and traditional surveys, the results were distilled into the final streetscape enhancement recommendations that appear in this document.

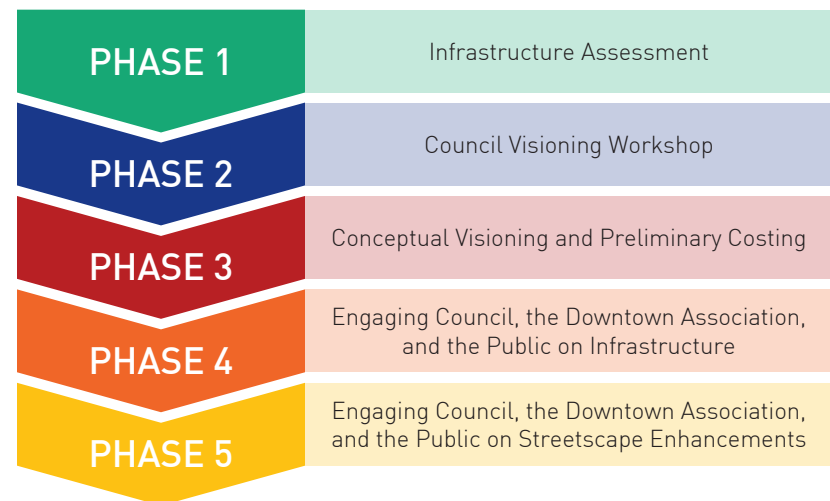


Figure 2: Project Phasing

## 2.0 SUBSURFACE UTILITY ASSESSMENT

### 2.1 Introduction

Phase 1A and 1B of this study establish a baseline of critical infrastructure condition, lifecycle, and recommended improvements, as a first step in the process of developing a downtown redevelopment plan. An assessment of the existing underground utilities within the study area (Figure 3), particularly the deep utilities consisting of water, sanitary sewer, and storm sewers, was completed. Considerations in the qualitative assessment include:

- Age and condition of infrastructure;
- Location/alignment of infrastructure;
- Capacity of existing infrastructure to serve new development; and
- Recommendations for replacement schedule, based on condition of infrastructure.

Before any major surface improvements are undertaken it is important to know that the underground utility systems are in reasonable shape. It is undesirable to invest in surface infrastructure improvements without understanding the age, condition, and capacity of the underground utilities.

As part of Phase 1A, this overall assessment of the underground utilities is critical in the process of decision making with respect to future works.



Figure 3: Overall Plan of Downtown Grande Prairie

## 2.2 Sanitary Sewer Assessment

During work on Grande Prairie's water and sanitary sewer master plan for Aquatera, the hydraulic capacity of the downtown sewers was assessed for their existing condition and proposed future use.

This study indicated that the Downtown area is serviced with vitrified clay tile (VCT), some installed as far back as 1938. VCT pipe joints do not seal nearly as well as the newer PVC pipe and is considered a main contributor to the high infiltration rates documented in the study. The VCT pipe is considered beyond its serviceable life, according to best practices in the region, and based on our experience. In locations where surface infrastructure is slated for major enhancement, replacement of the underlying sanitary sewers is recommended. In areas where immediate replacement is not identified, CCTV inspection would help confirm the structural condition of the sanitary sewers, assist in scheduling replacement, and should be included in capital budgets for the city.

The Downtown Enhancement Area Redevelopment Plan (DEP) area (Figure 3) has a higher-than-average inflow and infiltration (I/I), largely due to age/condition of existing pipes. The current service level in these areas is lower than the two-year storm event as surcharging still occurs within 2m below-ground during the two-year four-hour storm events. The existing trunks that service the study area experience surcharging during wet weather and do not meet current

design service levels. The additional dry weather flow for the redevelopment is not significant in comparison to the total peak wet weather flow.

The new wastewater model confirms there is surcharging of the pipes in the proposed redevelopment areas. Therefore it is important to look at servicing strategies to facilitate the desired redevelopment, including upgrades, where required. Surcharging of this infrastructure has downstream effects, by requiring treatment of infiltrated storm water, in addition to sanitary flows. The infiltration is unnecessarily using capacity in the treatment facilities.

## 2.3 Water Distribution Assessment

The oldest pipe in the area was installed in 1948, while the most recent pipes were installed on 100th Avenue in 1970 and 1975 with Transite (TR) or Asbestos-cement (AC) pipe.

The Chrysotile Institute estimates AC pipe lifespan at 70 years, but actual service life depends largely on pipe condition and working environment. Over time, AC pipe undergoes gradual degradation in the form of corrosion (i.e., internal calcium leaching due to conveyed water and/or external leaching due to groundwater). Such leaching leads to reduction in the effective cross-section, which results in pipe softening and loss

of mechanical strength. Accordingly, as the water distribution system ages, the number of AC pipe failures increases with time. In light of these risks, an AC pipe condition assessment would assist in determining the remaining useful service life and in developing a suitable, proactive replacement plan for the distribution system.

The water network currently experiences issues with providing adequate fire flows, as some of the area is serviced by mains that are too small to carry the required flows. Fire flow deficiencies are shown at two nodes in the ultimate model, one at 101st Street and 101st Avenue corner and the other at 99th Avenue and 97th Street corner (Figure 3). There are building design interventions, such as sprinklers, that drastically improve the ability of current water network capacities to provide adequate fire flows.

A possible upgrade to resolve the 101st Street and 101st Avenue corner would include installing connection lines in 101st Street, between 102nd and 100th Avenue. A possible upgrade to resolve the 99th Avenue and 97th Street corner would include upgrading the 100mm diam. line to 150 mm diam. in 99th Avenue East of 98th Street (Figure 3).

## 2.4 Storm Sewer Assessment

The recent Stormwater Master Plan (2013) highlights drainage issues in the area, many of which are related to the I/I wet weather flows in the sanitary sewer.

There are a few locations where the recent stormwater model noted specific manholes that surcharge to the surface during a 1:5 year storm and some surcharging on a section of 99th Avenue from 102nd Street to 101st Street, and on 101st Street from 99th Avenue to 98th Avenue.

The Stormwater Master Plan shows that completion of future infill development may increase the incidence of surcharging in the storm system in some areas, but for the most part, the system accommodates the flows. Hard surfaces are currently the predominant feature in the downtown study area. Consequently, changing from hard surface gravel or asphalt parking to buildings with rooftops and hard landscaping is not expected to change the overall distribution and run-off coefficients in the study area. Existing problem spots are recommended to be studied in greater detail and addressed during detailed design and streetscape construction work.

A recent CCTV survey conducted by the city did show that some storm pipes, catch basins, and manholes were cracked and showing signs of age. For the specific areas with hydraulic issues as discussed above, the structural condition of each block proposed for streetscape upgrading should be reviewed at detailed design and during streetscape construction work.

## 2.5 Summary of Subsurface Infrastructure Recommendations

Of the three deep utilities, the sanitary sewer is considered to be past its serviceable life and replacement is recommended.

Critical failures are difficult to predict in any infrastructure system, but this infrastructure should be replaced in the coming years, especially if major surface improvements are anticipated.

The capacity of the potable water system is considered adequate in most locations for current development densities and uses, with the exception of the locations noted. However, to accommodate and encourage medium or higher densities in the downtown area, improvements to the capacity and sizing are suggested. It is assumed that newly constructed commercial and medium to high density residential buildings will be designed with automatic sprinkler systems. Specific sizing of water mains will need to be determined during detail design. In any event, sizing to accommodate future resiliency and capacity is not anticipated to have a significant effect on pricing, and is accommodated in the contingencies.

The storm sewer CCTV investigations suggest that some of the storm infrastructure is at, or near, the end of its functional lifespan, and currently identified areas should be replaced.

The detail design process should consider CCTV on areas not currently investigated.

Overall, the recommendations regarding all three of the deep utilities suggest that in areas where any utility is being replaced, and where the surface infrastructure is being replaced, all three deep utilities be designed and constructed to maximize the long term capital and operational cost effectiveness.



## 3.0 SURFACE INFRASTRUCTURE ASSESSMENT

### 3.1 Introduction

Before any major surface improvements are undertaken, it will be important to know that the underground utility systems are in reasonable shape. This section documents the existing condition, estimated costs to repair, rehabilitate or replace the roads, sidewalks, and curbs and gutters within the study area. This Surface Infrastructure Assessment comprises a review of existing information for roads, sidewalks, and curbs and gutters, a visual inspection and documentation of existing conditions (Figure 4), and high level cost estimates to repair, rehabilitate, or replace sections of roads.

The roads within the study area are of varying age, and are generally in fair to good condition. Most of the roads exhibit typical signs of wear and tear, such as varying degrees of transverse cracking, rutting, and surface deficiencies (e.g., potholes or other localized failures). Most have worn pavement markings, including areas where the thermoplastic markings are worn, as noted on 98th Street by the railway crossing between 97th Avenue and 96th Avenue. Table 1 in Appendix B summarizes the observations from our on-site visual inspection of the roads, sidewalks, and curbs and gutters, while Figure 4 displays these findings in plan. Table 2 in Appendix B lists the visual condition ratings along with the estimated areas and cost of replacement assuming full structural replacement.

### 3.2 Roads

From our visual assessment, most of the roads may continue to be serviceable through continued regular maintenance activities, such as crack repair, localized patching, etc.

When conditions warrant more extensive rehabilitation work, roads may require a mill and inlay or overlay, or, as in the case of 97th Avenue, a full depth reclamation. If significant work is required, such as a full depth reclamation or even reconstruction, an evaluation for replacement or rehabilitation of the subsurface infrastructure is advised. Likewise, if through the subsurface infrastructure assessment, it is determined that replacement of significant sections of storm, sanitary sewer, or water distribution is required, then the road structure will need to be replaced.

The most severe road sections from visual, on-site observations are the following:

- 100th Avenue (Richmond Avenue) between 98th Street & 102nd Street
- 99th Street between 100th Avenue & Montrose College/ Provincial Building
- 101st Avenue between 100th Street & 102nd Street (this section was recently spray patched, making it visually difficult to access)

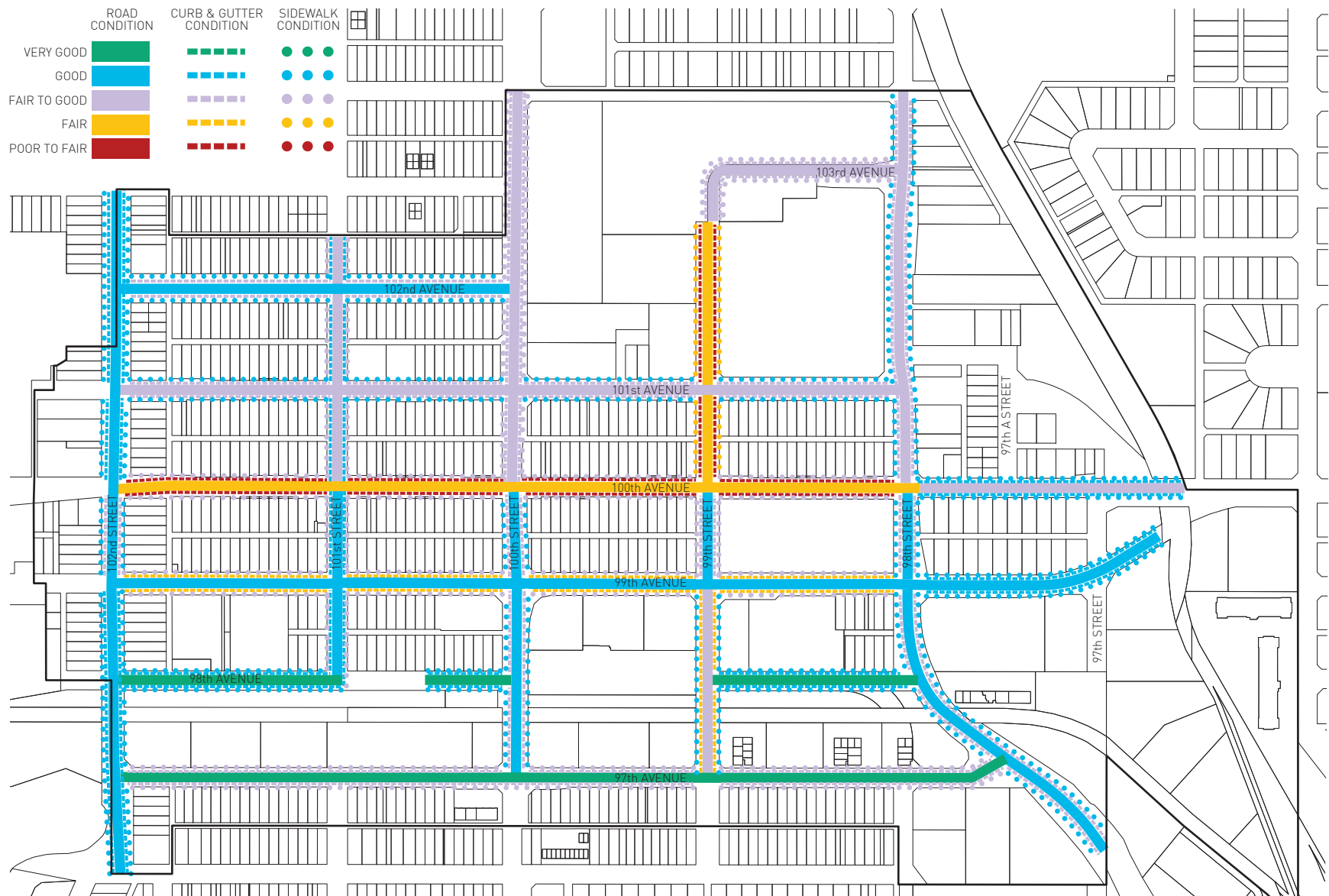


Figure 4: Surface Infrastructure Condition Assessment Findings

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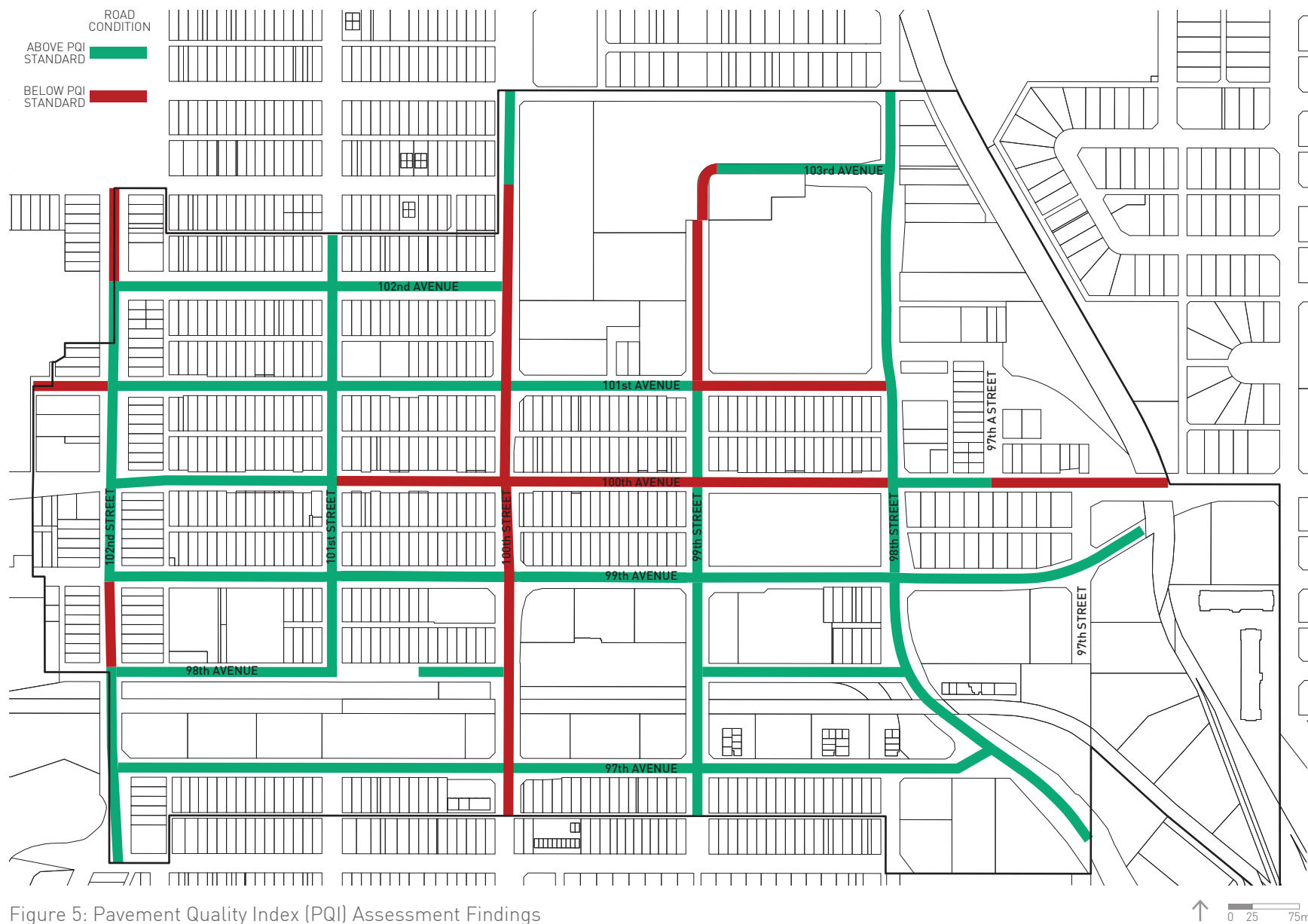


Figure 5: Pavement Quality Index (PQI) Assessment Findings

Rehabilitation of the sidewalks, and curbs and gutters (as required) should be combined with the roadworks. From Table 2 in Appendix B, it is noted that the existing road widths may not correspond directly with the typical road cross sections from the City of Grande Prairie's Design Manual, and may have wider overall width than required by standard. There may be opportunity to review the overall road width, while maintaining and accommodating the number of travel lanes and parking lanes, if appropriate, but modifying the overall street cross section to improve aesthetics or functionality; however further assessment or design will be required. Specialized street cross sections are included in later sections of this report.

An analysis of the downtown roads' Pavement Quality Index (PQI) rating is also presented in Figure 5. Each road section is given a PQI, which includes ride comfort, surface distress, and structural adequacy of the pavement, on a scale of 1 to 100, with 100 being the highest performing rating. The City of Grande Prairie aims for PQI ratings of 55 out of 100 for arterial roadways, 50 out of 100 for collector roadways, and 45 out of 100 for local roadways. Roads that decline below these ratings tend to require more extensive rehabilitation to return the roadway to an acceptable level, such as complete asphalt removal and replacement, or complete reconstruction.

Based on both the visual and PQI assessments of road surfaces, the following downtown roads are in the most serious need of repair or reconstruction:

- 100th Avenue (96th - 97th Street)
- 100th Avenue (98th - 102nd Street)
- 101st Avenue (98th Street - 99th Street)
- 101st Avenue (102nd Street - west boundary)
- 99th Street (100th - 103rd Avenue)
- 100th Street (96th - 103rd Avenue)
- 102nd Street (98th - 99th Avenue)
- 102nd Street (102nd - 103rd Avenue)

It is understood that the 2009 Transportation Master Plan (TMP) is becoming dated, so an update may be worthwhile to consider the circulation of traffic, classification of roads, and accommodation of cars, trucks, transit, and alternative modes. Further, any significant change due to a proposal for development or densification should be accompanied by a traffic impact assessment including a review of parking at the time of specific development application. This would determine if additional changes to access points, traffic circulation, traffic signalization, and possibly parking restrictions are required as a result of the impacts of a specific development.

### 3.3 Curb & Gutter Assessment

Although most of the curbs and gutters within the downtown area exhibit signs of wear, likely due to snow clearing operations, most are in either fair to good condition or in good condition, and will continue to be serviceable in the foreseeable future. Some are chipped or have minor damage that does not affect their function. From the visual inspection, areas

identified as poor are areas where significant portions have either deteriorated/eroded or are completely missing. Visually, the most extensive or severe areas of curb and gutter noted during our on-site review are:

- 100th Avenue (Richmond Avenue) between 98th Street & 102nd Street
- 99th Street between 100th Avenue & Montrose College/Provincial Building

The areas above have long sections that have deteriorated significantly or are essentially non-existent. Once again, barring complete rehabilitation of the surface and subsurface infrastructure, repair or rehabilitation of the curbs and gutters should be programmed along with adjacent roadworks.

### 3.4 Sidewalk Assessment

Much of the sidewalks throughout the downtown area are made up of pavers. There are localized areas of the downtown where more typical concrete sidewalks are noted, either in the periphery or due to new development. In general, sidewalks are 2.5 to 3.0 metres in width, except along 100th Avenue (Richmond Avenue) where wider sidewalks of approximately 5 metres prevail (including both public and private realm sidewalk). The paver conditions are varied, with the predominant issue being settlement and heaving as a result of frost or subgrade failure. This substructure heaving and settling results in uneven surfaces that create areas of ponding water

and ice, causing tripping hazards. It is understood that the city has a dedicated crew that maintains and repairs the pavers as part of its ongoing maintenance program. From our on-site review, it was noted that the most severe section of sidewalk was on 99th Street, between 100th Avenue and Montrose College/Provincial Building.

As the concrete pavers are subject to heaving and settlement from the freeze-thaw cycles, and due to the significantly higher cost to install them, conventional concrete sidewalks are the most cost effective replacement solution. An aesthetic treatment could be incorporated into a streetscaping scheme, if desired, at less cost, which would perform better in the Grande Prairie context. Alternative options, such as placing the pavers on a cement stabilized subbase or concrete slab, could be considered at additional cost.

It is worthwhile noting that many of the existing concrete sidewalk ramps do not meet the current City of Grande Prairie Construction Manual standards. Many of the sidewalk ramps in the downtown area have traffic signal or streetlighting paraphernalia within the ramps which could potentially create issues/hazards for users. Upgrades or redevelopment may contemplate detectable surface to enhance the universal accessibility of the streetscape and the safety of pedestrians with less than perfect vision.

### 3.5 Summary of Surface Recommendations

Based upon the review of existing conditions, it is observed that the majority of the roadways could remain serviceable through continued maintenance, such as yearly crack sealing, spray patch, or asphaltic patch and pothole repairs. Some would require an overlay or mill and inlay pavement rehabilitation if subsurface work is not required or programmed in the near to medium term future.

Based upon Table 1 in Appendix B where visual condition ratings were summarized for the roads, sidewalks, and curbs and gutters, it is apparent that some roads are in more urgent need of upgrade or reconstruction than others. It is assumed that reconstruction of the sidewalks, and curbs and gutters will be packaged with the adjacent roadway unless other factors prevail. It is also assumed that the city will continue with their program of sidewalk repairs until such a time that the roadway reconstruction is required, or when the subsurface infrastructure warrants an upgrade due to storm, sanitary, or water system failures or inability to meet demand. It is recognized that either the roadway reconstruction or the need to upgrade the subsurface infrastructure will trigger the need to upgrade the other.

If sidewalks or curbs are to remain intact, it is recommended that the most appropriate method to replace individual water services to the buildings and businesses on each street be determined.

The areas of roadway (and curb and gutter) with the most severe conditions based upon our visual assessment include:

- 100th Avenue (Richmond Avenue) between 98th Street & 102nd Street
- 99th Street between 100th Avenue & Montrose College/ Provincial Building

And for sidewalk:

- 99th Street between 100th Avenue & Montrose College/ Provincial Building

It is suggested that a downtown mobility/transportation assessment plan be conducted as part of the streetscape enhancement implementation plan, further to the Community Mobility Plan that was recently completed. The study should focus on traffic engineering evaluation of all scenarios, impacts, and recommendations for implementation of all modes, including private vehicles, commercial trucks, cycling, pedestrians, and transit. This transportation study should also be conducted in accordance with other city-wide policies, including the latest version of the city's TMP, Transit Master Plan, Active Transportation Strategy. The study would also need to review the following:

- Baseline operational condition for future monitoring
- Travel demand forecasting as per proposed Land Use plan and intensification opportunities
- Traffic modeling/intersection capacity analysis
- Evaluation of traffic performance for all scenarios
- Signal warrants
- Impact on adjacent streets
- Functional road classification (based on forecasted traffic demand)
- Parking demand and supply management strategies
- Access management

## 4.0 REVISITING THE COUPLET

### 4.1 Purpose of the Couplet

A couplet is defined as a pair of one way streets that function as a single higher capacity street, typically separated by one city block. Grande Prairie currently has a couplet system with two lanes of westbound traffic on 100th Avenue and three lanes of eastbound traffic on 99th Avenue.

Since the 1980s, the city has explored a plan to relocate the westbound traffic currently on 100th Avenue to 101st Avenue. The primary purpose of this is to add capacity to westbound traffic moving through the downtown core by having three westbound lanes on 101st Avenue. This would mirror the capacity of 99th Avenue, which has three eastbound lanes.

The City of Grande Prairie has limitations with respect to east-west movements (Figure 6). The Bear Creek Corridor and the rail yard (adjacent to Resources Road) create difficult barriers. The only east-west corridors that transverse the city are Highway 43, 132nd Avenue, 116th Avenue (bypass), 100th Avenue, 84th Avenue, and 68th Avenue. However, 84th Avenue terminates at Resources Road, which funnels all of the traffic east of the tracks to either 68th Avenue or 100th Avenue.

### 4.2 Status of the Couplet

In 2011, Grande Prairie Planning Staff presented Council with a recommendation report on the proposed couplet relocation project (Appendix C). At that time it was Planning Staff's opinion that the project had the potential to have a negative impact on the existing downtown core while doing little to

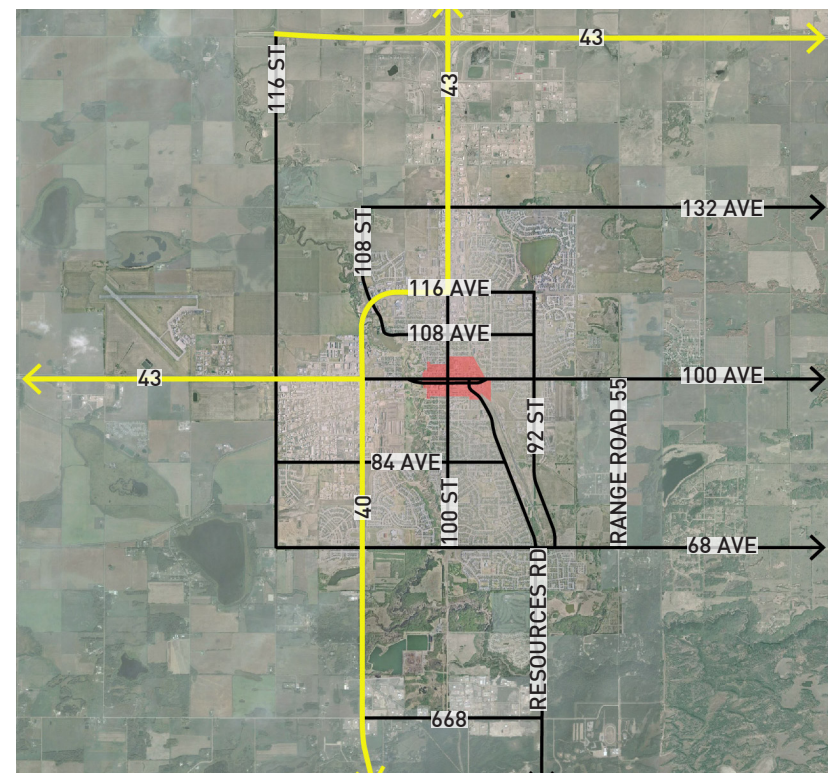


Figure 6: City of Grande Prairie East/West Movements

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solve city wide transportation issues. That Public Works Committee recommended that Council terminate the couplet project completely; direct Planning Staff to update the DEP accordingly, and explore opportunities without the couplet project. This recommendation was accepted by Council and the couplet project was terminated.

In light of the current work on the downtown streetscape enhancement project, Council recently made a request to revisit the couplet project and discuss whether it would benefit the enhancement of the downtown.

### 4.3 Impacts of the Couplet

In the 1980s, the dominant transportation planning practice in North America was to “build more capacity”. If there was an area that was experiencing congestion, the answer was to simply increase capacity through the addition of lanes, signal synchronization, and intersection improvements. While these capacity-building measures are effective in accommodating more vehicles and enhancing traffic flow, the benefits can potentially diminish over time and have a negative impact on the built environment, especially in a downtown context. For example, the pedestrian setting is negatively affected by lack of pedestrian amenities or an unwelcoming environment due to high speeds, extremely wide crossings, and a perception of vehicular priority.

In recent years, more attention has been placed on the impact that roadway system design has on the overall quality of built environments. The emerging model is commonly referred to as “complete streets”, and incorporates many goals other than simply moving traffic, including aesthetics, pedestrians, cyclists, and the overall look and feel of the roadway.

In Table 1, four Grande Prairie couplet scenarios are compared in terms of their impacts on design, parking, traffic congestion, business exposure, pedestrian experience, safety, cost, and long-term solutions, each described as follows:

#### *Scenario 1: Status Quo*

The status quo scenario, in Figure 7, assumes that the Grande Prairie downtown remains the same, with no changes in roadway design or streetscape quality. 101st Avenue has two lanes of two-way traffic, 100th Avenue has two lanes of westbound traffic, and 99th Avenue has three lanes of eastbound traffic.

#### *Scenario 2: Relocated Couplet on 101st Avenue*

The relocated couplet scenario, in Figure 8, explores moving the westbound traffic that is currently on 100th Avenue to 101st Avenue, adding capacity by having three westbound lanes on 101st Avenue. This scenario assumes that there will be resulting streetscape improvements to 100th Avenue when it becomes open to two-way traffic.

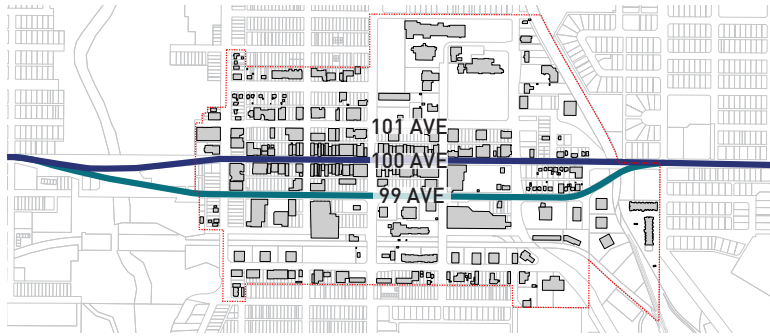


Figure 7: Status Quo (Scenario 1)

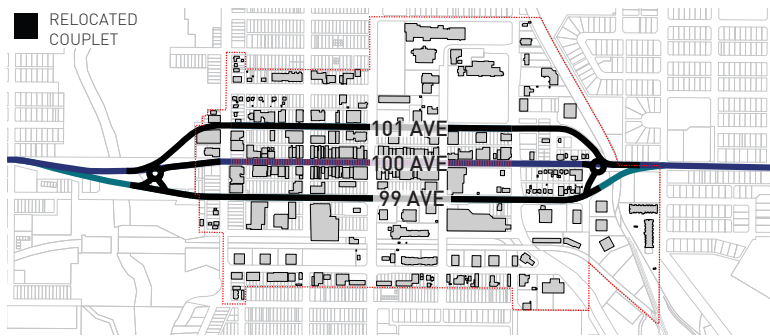


Figure 8: Relocated Couplet on 101st Avenue (Scenario 2)

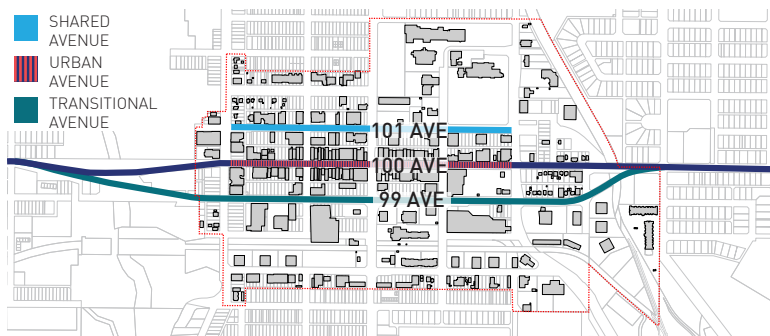


Figure 9: Streetscape Enhancement (Scenario 3)

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### Scenario 3: Streetscape Enhancement

The streetscape enhancement scenario, in Figure 9, recommends retaining the original couplet on 99th and 100th Avenues, but enhancing each of the downtown streets in various ways to improve traffic congestion, urban design, business exposure, pedestrian experience, safety, etc. For example, 100th Avenue would be urban in character and 101st Avenue would become a shared festival street.

### Scenario 4: Streetscape Enhancement + 84th Avenue Bypass

The streetscape enhancement + 84th Avenue bypass scenario, in Figure 10, combines Scenario 3's downtown streetscape enhancements with a citywide transportation solution. A bridge would be constructed over the CN Rail line to connect 84th Avenue to 92nd Street, creating a major East/West bypass of the downtown for through-traffic.

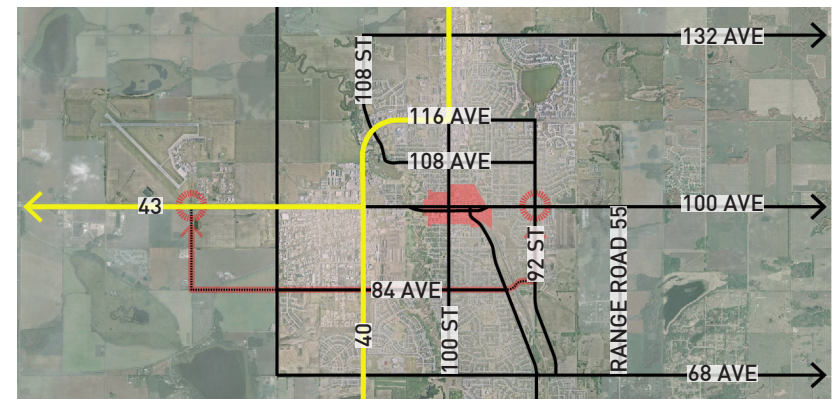


Figure 10: Proposed 84th Avenue Bypass (Scenario 4)

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Table 1: Couplet Scenario Comparison Matrix

	SCENARIO 1: STATUS QUO	SCENARIO 2: RELOCATED COUPLET ON 101st	SCENARIO 3: STREETSCAPE ENHANCEMENT	SCENARIO 4: STREETSCAPE ENHANCEMENT + 84th AVENUE BYPASS
<b>100th &amp; 101st AVENUE RIGHT-OF-WAY DESIGN</b>	<ul style="list-style-type: none"> <li>• <b>100th Avenue:</b> 20m; 2 westbound drive aisles; 2 parking lanes; narrow pedestrian realm</li> <li>• <b>101st Avenue:</b> 20m; 2 drive aisles (two-way); 2 parking lanes; narrow pedestrian realm</li> </ul>	<ul style="list-style-type: none"> <li>• <b>100th Avenue:</b> 20m; 2 drive aisles (two-way); 2 parking lanes; narrow pedestrian realm</li> <li>• <b>101st Avenue:</b> 20m; 3 westbound drive aisles; 1 parking lane; narrow pedestrian realm</li> </ul>	<ul style="list-style-type: none"> <li>• <b>100th Avenue (urban):</b> 20m; 2 westbound drive aisles; 2 parking lanes; wider/enhanced pedestrian realm</li> <li>• <b>101st Avenue (shared):</b> 20m; 2 drive aisles (two-way); 2 shared parking lanes that can be programmed periodically for events, festivals, etc; wider/enhanced pedestrian realm</li> </ul>	<ul style="list-style-type: none"> <li>• <b>100th Avenue (urban):</b> 20m; 2 westbound drive aisles; 2 parking lanes; wider/enhanced pedestrian realm</li> <li>• <b>101st Avenue (shared):</b> 20m; 2 drive aisles (two-way); 2 shared parking lanes that can be programmed periodically for events, festivals, etc; wider/enhanced pedestrian realm</li> </ul>
<b>TRAFFIC CONGESTION</b>	<ul style="list-style-type: none"> <li>• Five traffic lights with synchronized signals through downtown</li> <li>• Congestion occurs during peak hours, for three short periods of time: early morning, lunch hour, and end of work day</li> </ul>	<ul style="list-style-type: none"> <li>• Five traffic lights with synchronized signals through downtown</li> <li>• Adding an additional westbound vehicular lane on 101st Avenue may induce traffic, with similar congestion occurring during peak hours</li> </ul>	<ul style="list-style-type: none"> <li>• Five traffic lights with synchronized signals through downtown</li> <li>• Congestion may still occur during peak hours, but streetscape enhancements may have a traffic calming effect</li> </ul>	<ul style="list-style-type: none"> <li>• Five traffic lights with synchronized signals through downtown</li> <li>• Less downtown congestion during peak hours due to 84th Avenue bypass</li> </ul>
<b>BUSINESS EXPOSURE</b>	<ul style="list-style-type: none"> <li>• Westbound through-traffic provides businesses along 100th Avenue with the exposure that they rely on to succeed</li> </ul>	<ul style="list-style-type: none"> <li>• By redirecting the through-traffic to 101st Avenue, businesses on 100th Avenue may receive less exposure</li> <li>• With much less businesses, 101st Avenue does not overly benefit from the increased exposure</li> </ul>	<ul style="list-style-type: none"> <li>• With the westbound through-traffic maintained on 100th Avenue, the existing businesses will still receive the exposure they rely on</li> </ul>	<ul style="list-style-type: none"> <li>• Drivers with no need or desire to pass through downtown can be redirected to 84th Avenue; however two-lanes of westbound through-traffic is maintained on 100th Avenue, still exposing businesses to many drivers</li> </ul>

Table 1: Couplet Scenario Comparison Matrix, continued

	<b>SCENARIO 1: STATUS QUO</b>	<b>SCENARIO 2: RELOCATED COUPLET ON 101st</b>	<b>SCENARIO 3: STREETSCAPE ENHANCEMENT</b>	<b>SCENARIO 4: STREETSCAPE ENHANCEMENT + 84th AVENUE BYPASS</b>
<b>PEDESTRIAN EXPERIENCE</b>	<ul style="list-style-type: none"> <li>• No changes to streetscape quality; Narrow pedestrian realm</li> </ul>	<ul style="list-style-type: none"> <li>• 100th Avenue may become more calm</li> <li>• 101st Avenue may have greatly increased vehicular traffic, which may negatively impact pedestrian connections to the Montrose site</li> </ul>	<ul style="list-style-type: none"> <li>• 100th &amp; 101st Avenues will have wider and improved pedestrian realms</li> <li>• 101st Avenue will become a shared festival street, supported by farmers' market &amp; Montrose site</li> </ul>	<ul style="list-style-type: none"> <li>• 100th &amp; 101st Avenues will have wider and improved pedestrian realms</li> <li>• 101st Avenue will become a shared festival street</li> <li>• Due to the 84th Avenue bypass, 100th Avenue may be more calm</li> </ul>
<b>SAFETY</b>	<ul style="list-style-type: none"> <li>• High traffic speeds and narrow pedestrian environment on 100th Avenue may decrease level of perceived safety</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased traffic and streetscape enhancements on 100th Avenue may increase level of perceived safety</li> <li>• Dominance of cars and narrow pedestrian environment on 101st Avenue may decrease level of perceived safety</li> </ul>	<ul style="list-style-type: none"> <li>• Streetscape enhancements on 100th Avenue, including wider pedestrian environment and traffic calming measures, may increase level of perceived safety</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased traffic and streetscape enhancements on 100th Avenue may increase level of perceived safety</li> <li>• Streetscape enhancements on 101st Avenue may increase level of perceived safety</li> </ul>
<b>COST</b>	<ul style="list-style-type: none"> <li>• No cost</li> </ul>	<ul style="list-style-type: none"> <li>• Costs to acquire lands not currently owned by the city</li> <li>• Roundabout construction costs</li> <li>• Planning and engineering costs</li> <li>• Streetscape enhancement costs</li> </ul>	<ul style="list-style-type: none"> <li>• Planning and engineering costs</li> <li>• Streetscape enhancement costs</li> </ul>	<ul style="list-style-type: none"> <li>• Costs to acquire lands adjacent to CP Rail line</li> <li>• Bridge construction costs</li> <li>• Planning and engineering costs</li> <li>• Streetscape enhancement costs</li> </ul>
<b>POTENTIAL LONG-TERM IMPACTS</b>	<ul style="list-style-type: none"> <li>• No long-term solution to a city wide congestion problem</li> </ul>	<ul style="list-style-type: none"> <li>• Providing three lanes for a four block portion of the downtown is not an appropriate long-term solution to a city wide congestion problem</li> <li>• Loss of a portion of Muskoseepi Park and loss of gateway greenspace entering Downtown from west</li> <li>• May impact future plans for Montrose site</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term solution to overall community improvement &amp; downtown vitality</li> <li>• 101st Avenue shared street may contribute to the future of Montrose site</li> </ul>	<ul style="list-style-type: none"> <li>• Long-term solution to overall community improvement &amp; downtown vitality</li> <li>• Providing an alternate East/ West transportation corridor is a long-term solution to a city wide congestion problem</li> </ul>

## 4.4 Couplet Discussion & Recommendations

### *Scenario 1: Status Quo*

The status quo scenario results in no changes to streetscape quality. While businesses will continue to gain exposure from the through-traffic, downtown congestion may still be an issue, with a perceived lack of safety for pedestrians and cyclists.

### *Scenario 2: Relocated Couplet on 101st Avenue*

The relocated couplet scenario induces traffic on 101st Avenue with the addition of a third westbound drive lane. As a result, pedestrian and cyclist safety, parking, and the cultural features of 101st Avenue, such as the Montrose site and farmers' market, may be negatively impacted. While, in concert with streetscape enhancements, 100th Avenue as a calmer two-way street may become very pedestrian oriented, exposure to its existing retail businesses may be greatly reduced by the lack of through-traffic.

Providing one additional westbound lane for only a four block portion of the downtown is not an appropriate long-term solution to a city wide congestion problem, especially in light of the other resulting issues.

### *Scenario 3: Streetscape Enhancement*

The streetscape enhancement scenario results in improved streetscape quality for all streets within the downtown, notably 100th and 101st Avenues. Although westbound congestion on 100th Avenue may still occur during peak hours, businesses will continue to gain exposure, and the streetscape enhancements may have a traffic calming effect, making the environment safer and more inviting for pedestrians. Streetscape enhancements on 101st Avenue, including shared street conditions and improved pedestrian realm, may spur redevelopment, adding to the cultural character of the street.

### *Scenario 4: Streetscape Enhancement + 84th Avenue Bypass*

The streetscape enhancement + 84th Avenue bypass scenario results in improved streetscape quality, as well as a long-term solution to a city wide congestion problem. Although exposure to existing retail businesses on 100th Avenue may be reduced by the lessened congestion, the street would still be open to westbound through-traffic for those who choose to drive through the downtown rather than down to the 84th Avenue bypass. The bypass simply provides an added alternative to east-west movement through the city to relieve some of the major congestion.

## 5.0 COMMUNITY ENGAGEMENT

Engagement for the Grande Prairie streetscape design project was structured into two parts. The first part revolved around workshops with Grande Prairie City Council and the Downtown Association to generate initial ideas and provide strategic direction for the project team. The second part of the engagement involved a broader public outreach to validate the design direction, provide decision makers with citizen feedback, and inform the final proposed design.

The strategic direction was critical to the project's success. To garner this direction, two workshops were held for both City Council and the Downtown Association. Councillors and the Downtown Association provided important contextual details, aspirations for the future and measures of success to inform the project. The content from these workshops provided the streetscape direction for the downtown and informed the broader public engagement.

To reach the general Grande Prairie population, a short survey was deemed the best avenue. This survey was available online as well as in paper form at a variety of community gathering locations. The survey began by asking people about their vision for the downtown before asking their streetscape preference. The three options selected for the survey were informed by the Council and Downtown Association workshops and participants not only selected a preferred option but also explained the reasoning behind their choice.

All of this feedback provided the details needed to inform the overall vision and streetscape plan presented in this document. After the final Council decision, the design will be presented to the public to generate interest and excitement about the improvements occurring downtown over the next few years.

### 5.1 Visioning Workshop #1

#### 5.1.1 Purpose

In August 2014, two initial workshops were facilitated, one with Council and Staff, another with the city's Downtown Association, to gain insight on their perceived approach to a successful downtown.

Complete workshop responses can be found in Appendix D. A summary of the "keys to success" is provided in the subsections that follow.

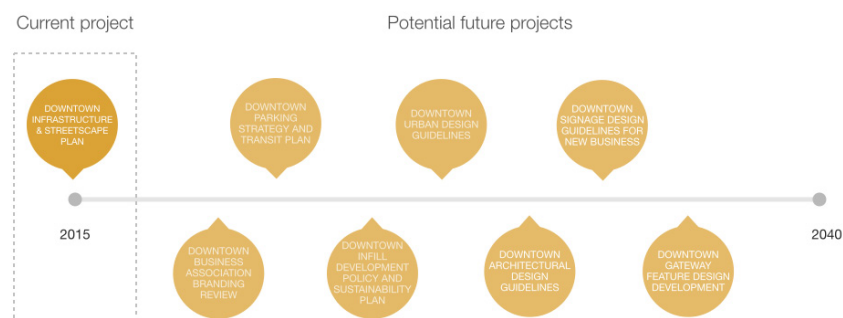
Participants were asked the following questions:

- Understanding Downtown(s)
  - What is the best thing about downtown Grande Prairie?
  - What is currently missing from the downtown?
  - What makes a good downtown?
  - What are the biggest opportunities for the downtown?
- Measuring Success
  - "This project will be a success if..."

## 5.1.2 Downtown Streetscape Keys to Success

There is no shortage of excellent keys to the success of downtown that came out of our workshop. However, within the scope of the current project, these are the ones that are within-scope:

- Really good, practical, low cost ideas
- Community buy-in
- Concrete actions associated with timelines and resources for implementation
- It proceeds and is completed
- Council is willing to make financial commitments
- Increased pedestrian mobility/mobility routes



*The Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project is an initial catalyst that sets the stage for an overall revitalization of downtown Grande Prairie that will occur through a series of thoughtful and intentional activities over time. By upgrading the infrastructure for the future and enhancing the streetscape as the initial step, private investment and continued public investment are catalyzed toward a move vibrant downtown.*

Figure 11: Conceptual Timeline Generated from Workshop Input

## 5.1.3 Broader Downtown Keys to Success

The following points outline broader, longer-term keys to success for downtown Grande Prairie. As outlined in the conceptual timeline in Figure 11, many of these keys to success are related to subsequent actions. However, the initial moves within this current project will set the stage for achieving these future successes:

- Increased hours of activity downtown
- Downtown is an attraction
- We attract all people to downtown
  - Tourism
  - BC folks
  - Northern AB folks
  - Residents
- If we can get public-private-partnerships
- Attracts private development interests and confidence
- People feel comfortable walking downtown all year long
- Regionalization
- More efficient transit with downtown as a destination
- Increased number of re-developed sites and number of new structures on vacant land
- Clear vision and understandable goals
- A downtown theme is identified
- See more activities and festivals occur during the year
- Crown Land resource revenues share in city to invest in downtown
- The public is educated about what we are doing
- Increased population downtown (residential intensification)

## 5.2 Visioning Workshop #2

### 5.2.1 Purpose

In November 2014, two additional workshops were facilitated with Council, Staff, and the Downtown Association, which focused on the following areas:

- Providing Council with an overview of the infrastructure assessment;
- Obtaining Council's views on what makes a great street;
- Discussing streetscapes, including:
  - Presenting a range of streetscape options for consideration,
  - Providing Council with a hands-on opportunity to understand how the various elements of a streetscape can (or can't) work together,
  - Allowing Council to score the options, based on a scorecard built upon their identified goals for the project; and
- Obtaining a brief vision statement for downtown from each member of Council.

Complete workshop responses can be found in Appendix E. A summary of the workshop "keys to success" is provided in the subsections that follow.

### 5.2.2 What Makes a Great Street?

Council provided a wide range of responses, but nearly all of them aligned with best practices for identifying elements of a great street, including:

- High quality architecture and design
- A unique identity
- Consideration of climate
- Enhanced landscaping
- Safety

### 5.2.3 Streetscape Options

A range of streetscape options were presented for Council to consider. After some discussion and an exercise that allowed Council members to create their own streetscape from a kit of parts, Councilors were asked to rate each option against a scorecard based on goals for the project. The results were as follows:

1. Option 3a: Centreline Shift [landscape on one side]
2. Option 3b: Shared Festival Street
3. Option 2a: Complete Street [flush bike lane]
4. Option 2b: Complete Street [separated bike lane]
5. Option 1: Basic Street Adjustment

Comparatively, the Downtown Association's streetscape rating results were as follows:

1. Option 3b: Shared Festival Street
2. Option 1: Basic Street Adjustment
3. Option 3a: Centreline Shift [landscape on one side]
4. Option 2b: Complete Street [separated bike lane]
5. Option 2a: Complete Street [flush bike lane]

When Council and Downtown Association responses are combined, the Shared Festival Street (Figure 12) is rated at #1 and the Centreline Shift (Figure 13) is rated at #2.

### 5.2.3 Vision for Downtown

Councilors were also asked to provide their vision for Downtown Grande Prairie near the end of the workshop. The full responses are in Appendix E, but the word cloud that follows highlights key words that emerged from what Council said (Figure 14).

This input will be used to inform the urban design recommendations as part of a final plan for the redevelopment of downtown Grande Prairie.



Figure 12: Option 3b: Shared Festival Street



Figure 13: Option 3a: Centreline Shift



## 5.3 Public Engagement

### 5.3.1 Process & Participation

A community engagement survey was open to the public from December 8, 2014 to January 16, 2015 (34 days) to collect feedback on the future of Grande Prairie's downtown. This survey had a total of 1,301 participants and was available both online and in paper form at various locations throughout Grande Prairie.

The survey generated 4,611 ideas by allowing residents to share their preferences and priorities for downtown, and help select the new look for downtown streets by asking three fundamental questions, as follows:

- What are your priorities for downtown Grande Prairie?
- What is your vision for downtown Grande Prairie?
- Which streetscape would you prefer to see in downtown Grande Prairie? (Figure 15)

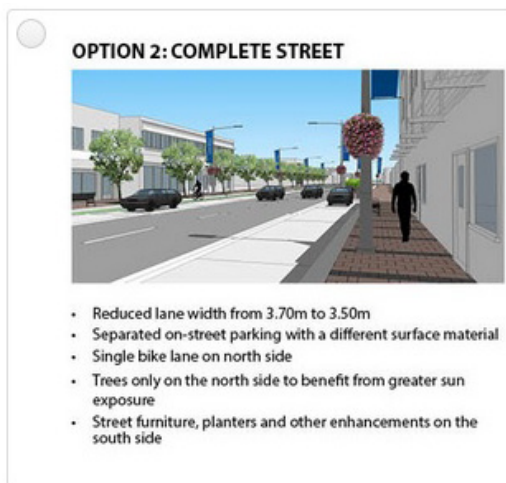


Figure 15: Downtown Enhancement Survey Streetscape Options

## 5.3.2 Theme Overview

Upon analysis of the survey responses, it was determined that the residents' *Top Rated Priorities* for Grande Prairie's downtown were the following:

- It feels **safe** downtown
- It's **convenient** to visit downtown
- It's easy to **walk** downtown

The themes and ideas heard in the vision and streetscape preference questions were quite aligned with one another, as shown in the detailed "What We Heard Report" in Appendix F. The majority of people (63%) agreed that Option 3: Shared Festival Street is the most desired for downtown Grande Prairie.

The most heard themes shared in the vision and streetscape questions, from most to least occurring, were as follows:

### *Vision*

- Commercial Business
- Urban Design
- Transportation
- Community
- Architecture
- Green Space
- Maintenance
- Miscellaneous

### *Streetscape Preferences*

- Urban Design
- Transportation
- Community
- Miscellaneous
- Commercial Business
- Green Space
- Maintenance
- Architecture

Key ideas that had equal popularity in both the vision and streetscape responses included:

- Gathering spaces (vibrancy)
- Trees
- Promoting/incentivizing businesses
- Modern & attractive design
- Landscaping
- Improved traffic flow
- Street furniture

## 5.3.3 Vision Takeaways

### *Highlights*

1. The Transportation and Commercial Business themes generated the most variety of ideas:
  - a. Transportation ideas spanned across sub-themes, from bike/pedestrian infrastructure, transit, and sufficient parking to accessibility, timing of lights, and improved traffic flow.
  - b. Commercial Business also had a multitude of popular sub-themes beyond the top 3, including — cultural/art uses, more local shops, entertainment/nightlife, promoting business, expanding the farmers' market, office space, and more.

2. Ideas categorized in the “Other” sub-theme, of the Community theme, included comments using language such as —friendly, inviting, having a good feel/atmosphere, and promoting community involvement.
3. About 55% of those who responded to the survey visit downtown Grande Prairie at least once a week.
4. Although density was not a hot topic in participant responses, 19 times more people spoke to wanting highrise development than those who spoke in opposition to it.

### *Tensions*

1. Quite a number of people spoke to parking options in the downtown, while an equally large group asked for more pedestrian and bike friendly infrastructure. Some participants even spoke to both: “Vibrant with walkability and plenty of parking” and, “Ample parking with pedestrian seclusion from traffic.”
2. There were a significant number of responses that asked for replication of quaint streets/districts that can be found elsewhere, referring to places such as Victoria, B.C., Amsterdam, and other European cities, while others iterated the importance of Grande Prairie as a thoroughfare for Canada’s transportation industry.

## 5.3.3 Streetscape Takeaways

### *Highlights*

1. The Urban Design theme had many popular sub-themes beyond the top 3, including:
  - a. Landscaping: “More sidewalk space and trees on both sides. It is the trees and the planters that make streets nice and friendly.”
  - b. Street Furnishing: “Anything is better than sitting on a curb, outside seating or benches would be nice”
  - c. Winter Design: “User friendly for everyone and ideal for all seasons”
2. All of the themes encompassed the majority of responses in 3 sub-themes, Urban Design excluded.
3. Sub-themes not listed in the theme overview, that were mentioned by at least 10 participants, include: snow clearing, family-oriented, cultural/art uses, expanded farmers’ market, flexible, functional, accessible (Transportation), and maintaining street widths.
4. Ideas categorized in the “Other” sub-theme, under the Community theme, included comments such as —welcoming, promote involvement, and support community.

## *Tensions*

1. Ideas regarding Urban Design do come with some disagreement as “Landscaping” and “Street Furnishing” seem to conflict with some respondents’ perceptions of “Winter Design”. Examples of this include: “A simple street plan is better suited to a winter city where ease of snow removal trumps a bunch of clutter from furniture etc which will see limited use” and, “I want to see a downtown designed for our weather. We have snow. To spend millions to have a sitting area that will not be used for 8 months a year is wrong...”
2. An equal number of people suggested widening and improving sidewalks compared to those who said not to widen them.
3. Overall, participants seem to desire the changes that will make downtown Grande Prairie a more vibrant place, but 43 people explicitly stated it must be cost effective. Taxes increasing as a result of redevelopment are not supported by this group.
4. Similar to the “vision” feedback, there was some tension in the Transportation theme, where about 90 participants want to see sufficient parking and another 90 want to see improvement in Pedestrian infrastructure.

## 5.3.5 Moving Forward

Based on the information collected from the public engagement effort, it is clear that the most desired concept for Grande Prairie is Option 3, the Shared Festival Street. The feedback supplementing the preferred features of the Shared Street mostly spoke to Transportation, Urban Design, and Community. Similarly, the feedback supporting participants visions also spoke to Transportation and Urban Design, with the addition of Commercial Businesses.

It should be recognized that there are participants who want to see little to no change and it will require extreme sensitivity to balance these tensions. To reiterate some of tensions found in the vision and streetscape preference sections:

- Parking options vs. more pedestrian and bike friendly infrastructure.
- Quaint streets/district precedents vs. status-quo thoroughfare for transportation industry.
- Conflict in design principles — beautification vs. winter city.
- Widening and improving sidewalks vs. not widening or improving sidewalks.
- Cost—effect on taxes.

This input, including both harmonies and tensions with respect to downtown priorities, vision, and streetscape preference, will be used to inform the urban design recommendations as part of a final plan for the redevelopment of downtown Grande Prairie.



## 5.4 Visioning Workshop #3

### 5.4.1 Purpose

In February 2015, two final workshops were facilitated with Council and the Downtown Association with the intent of gaining feedback on:

1. The proposed streetscape design;
2. The couplet and its relationship to the proposed streetscape design; and
3. The ideal phasing for the initial \$20 million investment.

Additionally, Downtown Association members were given a follow-up survey to advise on communication techniques during the design and construction process.

### 5.4.2 Feedback

#### *Council Workshop*

Council was receptive to the design recommendations with no major changes or edits suggested. They preferred the shared festival street to the original couplet design for 101st Avenue. The idea of a downtown bypass on 84th Avenue as a long-term solution to a city wide congestion problem was well-received.

Two potential construction phasing options arose out of the Council discussion, as follows:

#### **Option 1: Main Street Focus**

1. 101st Street
2. West side of 100th Avenue
3. West side of 101st Avenue
4. Continue along 100th Avenue

#### **Option 2: Shared Festival Street Focus**

1. 101st Street
2. West side of 101st Avenue
3. West side of 100th Avenue
4. Continue along 100th Avenue or examine private incentives for the funds

#### *Downtown Association Workshop*

Overall, the designs were seen positively, with the following suggestions provided:

- Consider snow clearing and the responsibilities of some businesses to clear larger spaces.
- Create modular units to make those nodes adaptable with connections to utilities – allow for a variety of insert configurations.
- Use the furniture zone as a way to de-clutter the street (e.g., fire hydrant coverage).

There were some thoughts about an option 2.5 where the couplet is accommodated to some extent using the north/south routes. The idea of a downtown bypass on 84th Avenue as a long-term solution to a city wide congestion problem was well-received, however there were opinions about discouraging traffic circles.

The Downtown Association had similar thoughts to Council about phasing - with debate on whether 101st Avenue or 100th Avenue should occur second.

As communication is very important to the Downtown Association when planning how businesses will weather construction, a follow-up survey was distributed during the workshop and at their Annual General Meeting on February 24, 2015. Direct email updates and updates provided to the Downtown Association for distribution to members via email or newsletters were the preferred techniques for communication. All survey responses are shown in Figure 17.

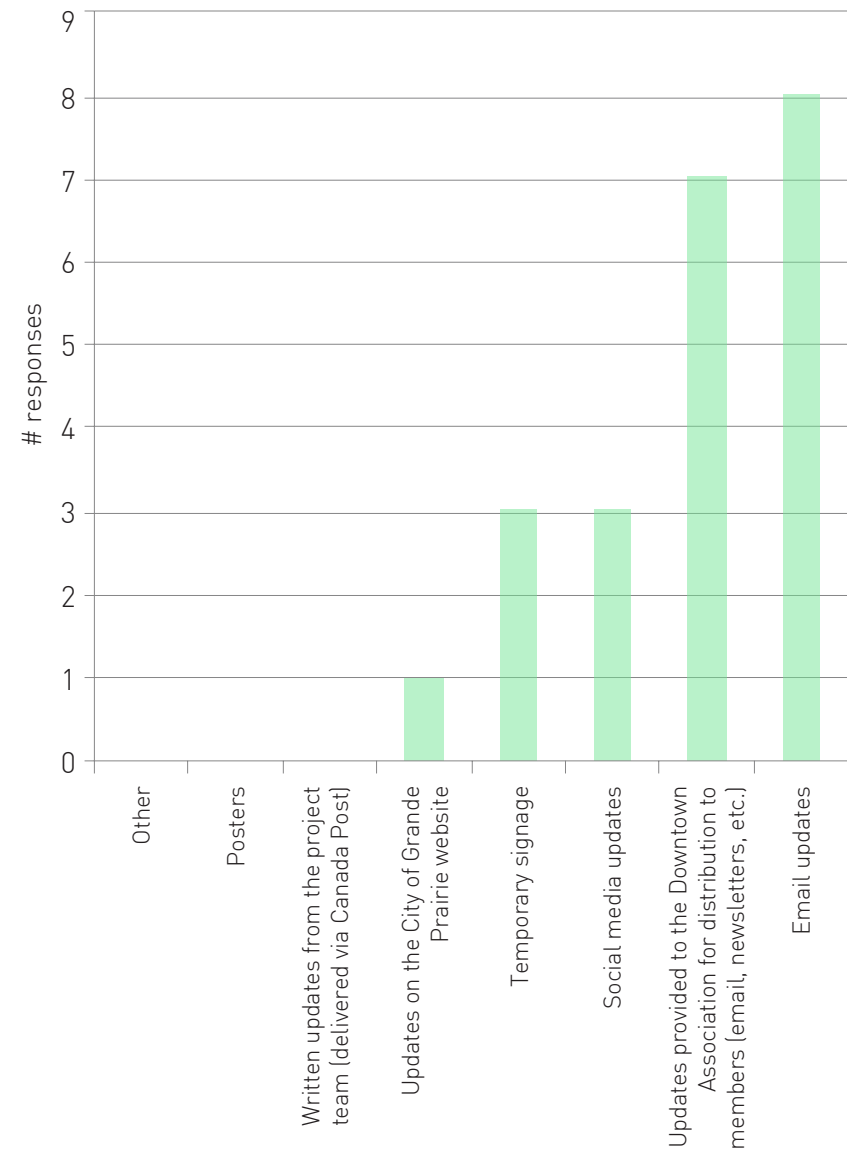


Figure 17: Downtown Association Communication Survey Results

## 6.0 URBAN DESIGN RECOMMENDATIONS

### 6.1 Vision

#### 6.1.1 Vision Statement

When developing any plan, it is important to have a strong vision that is supported by goals, objectives, and design principles. Grande Prairie's downtown streetscape vision will provide a unified perspective and driving force in moving the enhancement initiative forward. Results from the workshops and public engagement process have informed the development of the following streetscape vision statement:

***As the metropolitan heart of the city, downtown Grande Prairie will be a modern reflection of urban spirit and cultural vitality. Through unique and adaptive urban design, the downtown streetscapes will attract growth and support year round activity, promoting a sense of civic pride.***

#### 6.1.2 Streetscape Goals

Tied to the vision are seven broad streetscape enhancement goals that will inform the design framework for the downtown streets. These goals are as follows:

- Urban
- Modern
- Unique
- Attractive
- Walkable
- Cultural
- Active

#### 6.1.3 Objectives & Design Principles

In order to realize the vision and streetscape goals, nine objectives, informed by themes identified throughout the engagement processes, are proposed. With each of the objectives comes a set of principles that guide the urban design recommendations. These streetscape objectives and corresponding design principles are organized by theme on the pages that follow.

## *Identity*

1. To enhance an active and vibrant downtown destination that embraces the culture of Grande Prairie:
  - Identify opportunities for themed gateway features that contribute to the sense of destination when entering the downtown; and
  - Incorporate a unified theme throughout the downtown area.

## *Mobility*

2. To support the complete streets model, emphasizing pedestrian accessibility, transit supportive design, convenient parking, and opportunities for cycling infrastructure:
  - Give priority to the pedestrian experience within the public realm;
  - Provide supporting infrastructure for public transit, trail, and cycling networks;
  - Maintain on-street parking, where possible; and
  - Encourage the construction of a parkade in a convenient downtown location.

## *Safety*

3. To achieve safety for pedestrians, vehicles, and cyclists throughout the downtown enhancement area:
  - Implement Crime Prevention Through Environmental Design (CPTED) principles, where financially possible;
  - Enhance intersections, where possible, by incorporating small bump-outs to decrease the cross street distance; and
  - Incorporate mid-block crossings, where possible, to calm traffic and offer additional safe crossing conditions.

## *Urban Design*

4. To establish a cohesive design language through coordinated and complementary streetscape elements:
  - Define a modern and attractive material palette for all streetscape elements that results in a unified downtown character;
  - Incorporate safe and dynamic gathering spaces to support streetscape related activities; and
  - Identify locations for public art.

## *Economy*

5. To enhance the economic vitality of the downtown by attracting a mix of businesses that serve a wide variety of people:
  - Establish enhanced streetscape conditions that attract small, boutique businesses;
  - Improve the opportunity for night and weekend activities in the downtown, encouraging longer business hours; and
  - Promote downtown business via coordinated signage and way finding features.

## *Landscape*

6. To provide for sustainable landscape treatments that complement the character of downtown streets and result in their distinctive identity:
  - Incorporate appropriate species of trees and/or plant material that provide seasonal interest; and
  - Implement planting best practices to ensure healthy, context sensitive growing conditions.

## *Architecture*

7. To promote high quality architecture and redevelopment opportunities:
  - Establish enhanced streetscape conditions that attract high quality redevelopment;
  - Investigate development incentives (e.g., tax benefits, density bonuses, etc.) to encourage appropriate downtown redevelopment.

## *Seasonality*

8. To incorporate flexible design solutions into the streetscape to accommodate a range of functions and activities that can vary throughout the seasons:
  - Encourage flexible and dynamic streetscapes and furnishings that seamlessly support year round community events and ornamentation.

## *Maintenance*

9. To ensure ease of year round maintenance through the use of appropriate streetscape materials:
  - Use sustainable materials and construction best practices to decrease maintenance frequency and cost.

## 6.2 Land Use & Intensification

### 6.2.1 Land Use Plan

The City of Grande Prairie's 2004 Downtown Enhancement Area Redevelopment Plan (DEP) functions as the overall city policy guide for land use and development activity in the downtown core. By ensuring supportive and flexible land use policies and encouraging investment in specialty retail, residential, administrative uses, green spaces, and civic and cultural uses, there is every reason for the downtown to be repositioned as the heart of the city and an important economic driving force.

As shown in Figure 18, the DEP recommends a land use concept for the downtown that identifies thematic areas for civic, retail commercial, general commercial, mixed, and service commercial / light industrial uses. According to the DEP, the character of the principal activity nodes is intended as follows:

- 100th Avenue (Richmond Avenue) corridor is to be promoted as the pedestrian heart of the city.
- Montrose Square and Revolution Place are to be the prime civic, recreational, and cultural spaces. To this date, it has been largely agreed upon that a performing arts centre should be the principle facility on the South Montrose site, and studies will be undertaken to further explore its redevelopment as the cultural hub of the city.

- The 101st Avenue Corridor and 99th Avenue Corridor will be maintained as the downtown service and office areas.
- The City Centre node and adjacent blocks may be developed for general and larger format retail businesses.
- 97th Avenue shall be supported as a primary service commercial business and office corridor.
- The City Hall precinct is to function as a civic focus, and may include city administrative as well as general health care facilities and mixed use development.

The urban design vision, goals, and objectives for the enhancement of Grande Prairie's downtown streetscape are intended to support the themes and land uses identified in the DEP.



Figure 18: Existing DEP Land Uses

## 6.2.2 Intensification Opportunities

With Grande Prairie being one of Canada's fastest growing cities, the downtown may become a centre for redevelopment. Future intensification may be further spurred by the implementation of streetscape enhancements that add to the downtown's urban spirit and cultural vitality.

Three density intensification scenarios have been explored below. Both the medium density and high density scenarios support the recommended downtown land uses and proposed streetscape vision.

### *Density Scenario 1: Status Quo*

The status quo scenario assumes that all densities and parking areas remain the same. Figure 19 provides a benchmark for comparison purposes by simply demonstrating how Grande Prairie's downtown looks today in terms of building heights and densities, surface parking, and vacant lands.

### *Density Scenario 2: Medium Density*

The medium density scenario assumes 3-4 storey retail and office infill development of vacant lots and surface parking lots on 99th, 100th and 101st Avenues; 6 storey infill development at key intersections; consolidation of remaining low density residential properties to build 3-4 storey medium density residential; and the introduction of parkades and underground parking lots (Figure 20).

### *Density Scenario 3: High Density*

The high density scenario assumes 3-4 storey retail and office infill development of vacant lots, surface parking lots, and 1 storey buildings on 99th, 100th and 101st Avenues; 8-12 storey infill development at key intersections; consolidation of remaining low density residential properties to build 3-4 storey medium density residential; and the introduction of more parkades and underground parking lots (Figure 21).



Figure 19: Status Quo



Figure 20: Medium Density

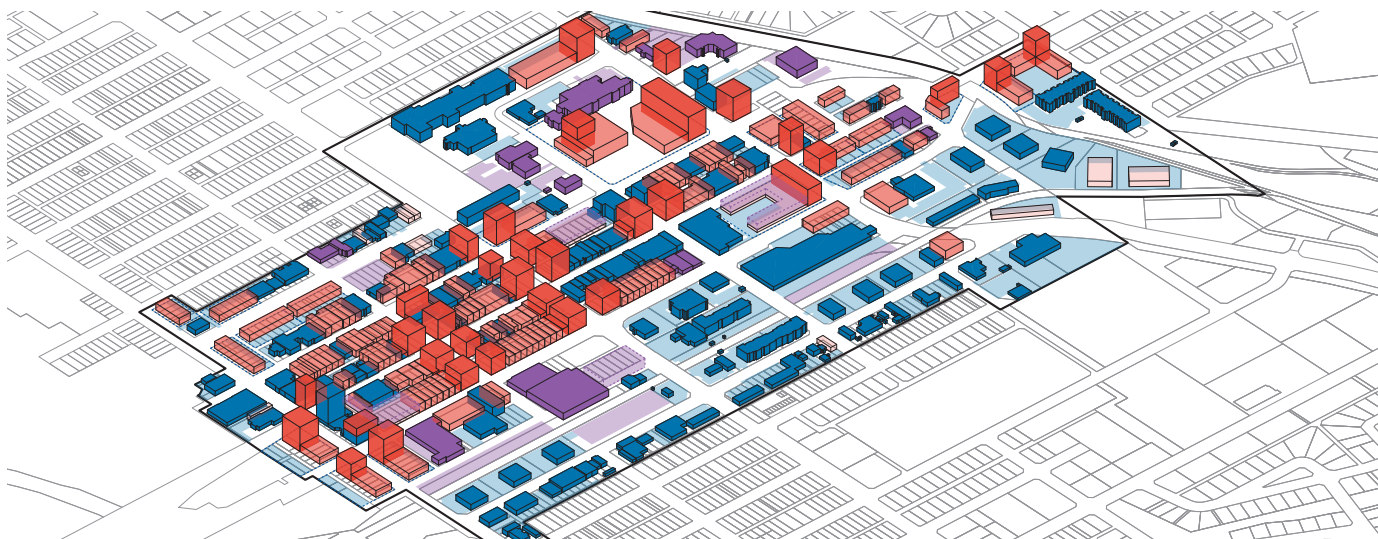


Figure 21: High Density

- PRIVATELY-OWNED BUILDINGS
- CITY-OWNED BUILDINGS
- PRIVATELY-OWNED PARKING
- CITY-OWNED PARKING
- ▨ PRIVATELY-OWNED VACANT LOTS
- ▨ CITY-OWNED VACANT LOTS
- 2 STOREY INFILL
- 3-6 STOREY INFILL
- 8-12 STOREY INFILL
- ▨ CITY-OWNED PARKADE
- ▨ UNDERGROUND PARKING

### 6.2.3 Downtown Parking

Downtown parking availability was identified as a key issue by Council, the Downtown Association, and the community at large. It will be important to undertake parking studies during downtown redevelopment efforts.

The medium and high density intensification scenarios suggest hypothetical locations for the construction of a number of parkades where city owned surface parking lots currently exist. As streetscape upgrades occur, constructing even one public parkade on a city owned surface parking lot should help to alleviate parking issues, as the number of new parking spaces would greatly exceed the number of those eliminated due to pedestrian realm enhancements. The provision of structured parking spaces need not be exclusively the responsibility of the city. It is likely that the private sector will provide parking opportunities affiliated with their developments to assist in servicing the associated business and residential uses.

Should redevelopment of surface parking lots continue in the future, either parkades or underground parking structures would be appropriate solutions. Figures 22 and 23 show potential parkade and underground parking structure opportunities, respectively.

### 6.2.4 Intensification Recommendations

In the theoretical investigation of opportunities for density and intensification, there are recurring themes that will require further study. As a summary, these high-level opportunities prevail, and are worthy of future study:

- Consider establishing policies to encourage and/or incentivize future downtown redevelopment:
  - Intensification of vacant lots and surface parking lots with 3-4 storey mixed use development.
  - Higher density mixed use development at key intersections.
  - Consolidation of remaining low density residential properties to build 3-4 storey medium density residential.
  - Introduction of parkade(s) on city owned surface parking lots.
  - Incorporation of underground parking structures with larger scale private development.
- Consider undertaking a downtown parking study to determine feasibility and potential locations of future city owned parkades.
- Work with the development and real estate industry to determine collaborative opportunities for increasing densities in the downtown.
- Verify that infrastructure improvements are consistent with the most probable timelines and densities for intensification.



Figure 22: Potential City Owned Parkade Locations

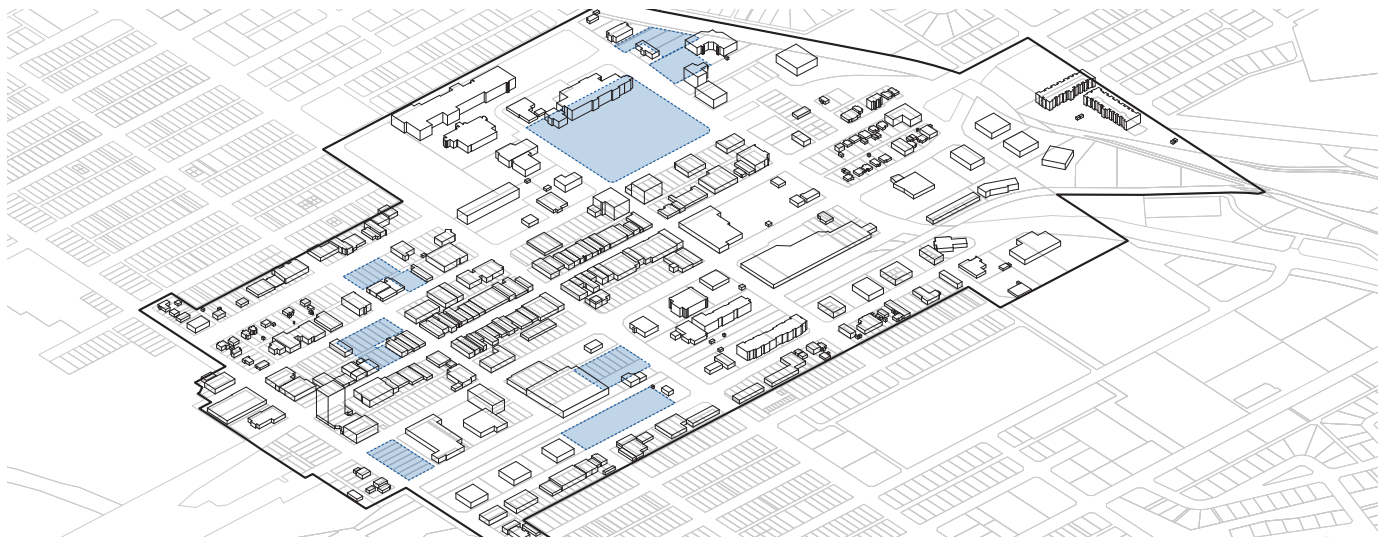
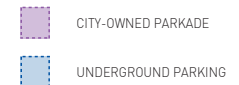


Figure 23: Potential Underground Parking Locations



## 6.3 Downtown Road Upgrades

### 6.3.1 Recommended Downtown Road Hierarchy

The emerging model of thoughtful street design is referred to as “complete streets”. This concept incorporates many goals beyond simply moving traffic, such as aesthetics, pedestrians, cyclists, and the overall look and feel of the roadway. According to Complete Streets for Canada, “a Complete Street is designed for all ages, abilities, and modes of travel.” [2012].

While the complete streets model of balance is ideal, there is no right or wrong way to complete a street because all streets are distinct, serving different modes and purposes throughout the downtown. Each street does not have to comprise every component of a complete street, so long as the downtown, as a unified whole, is complete. This notion adds to downtown vibrancy as one travels from street to street, experiencing its dynamic spirit.

Each downtown road in Grande Prairie has its own individual character, which also varies from one end to the other. To respect the existing differences, as well as the community input and land uses identified in the DEP, a recommended road hierarchy is proposed that further defines each of the roads within the downtown boundary through the application of distinctive streetscape treatments, tied together by an overarching downtown theme and modern material palette.

Presently, the heart of the downtown is centered at the intersection of 100th Avenue (Richmond Avenue) and 100th Street, with 100th Avenue functioning as a traditional shopping street. The current retail focus of 100th Avenue presents the opportunity to greatly enhance its urbanity as the pedestrian heart of the city. From this epicenter, it is proposed that one block north and one block south, along the entire downtown length of 100th Avenue, is defined as the **Urban Zone**, while the areas north of 101st Avenue and south of 99th Avenue are defined as the **Standard Zone**. As these designations suggest, the character of the roads closest to 100th Avenue can be considerably urban, permeating out to more standard treatments as they approach the north and south boundaries of the downtown area (Figure 24).

While all of the downtown roads are important, 100th and 101st Avenues may presumably have the most influence on downtown character and future redevelopment. With that said, the recommendations for these roads will be explored in the most detail, however the right-of-way (ROW) characteristics of all roads are further defined in the Table 2 and 3 comparison matrices, and additional drawings of these road ROWs can be found in Appendix G.

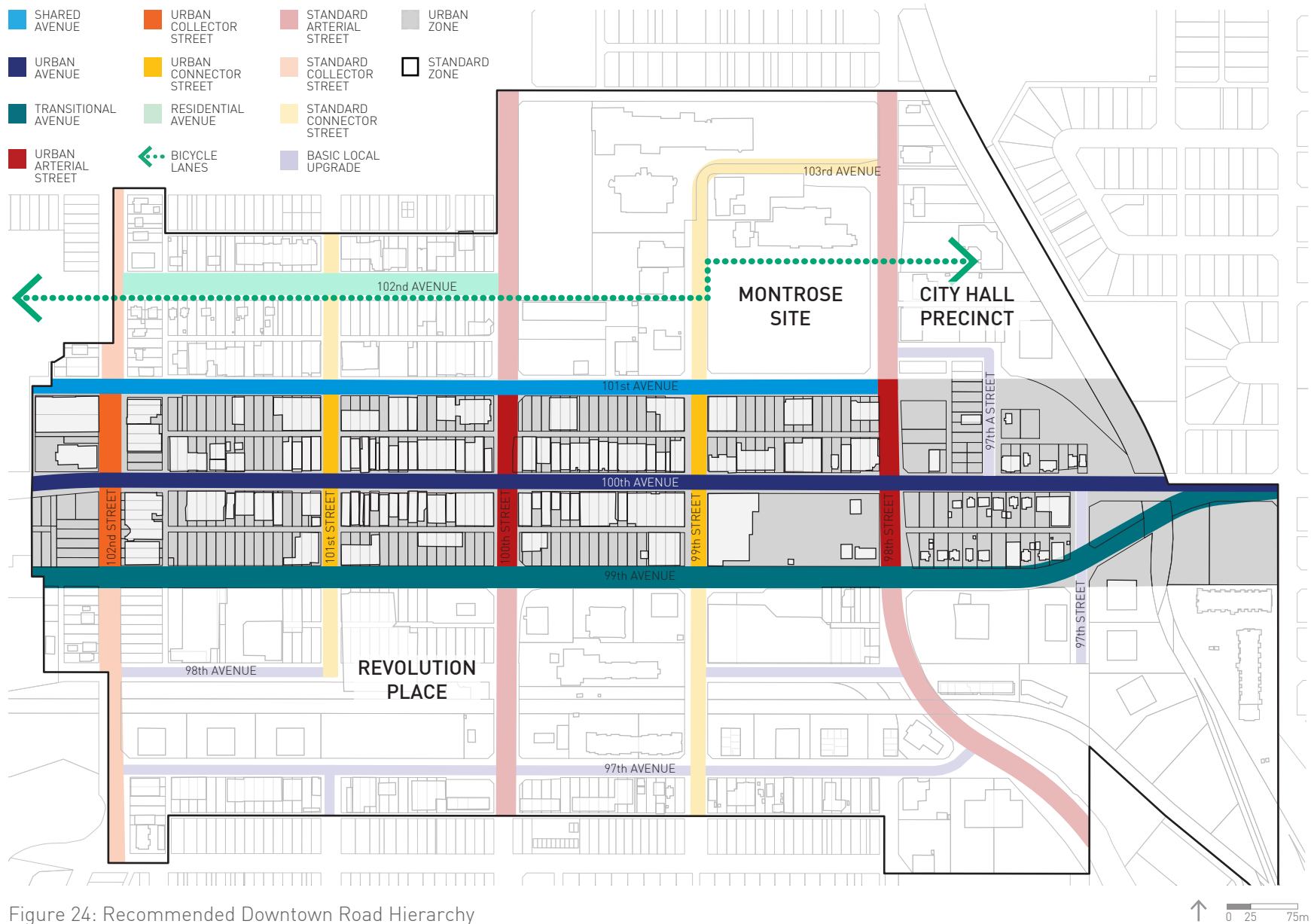


Figure 24: Recommended Downtown Road Hierarchy

Table 2: Grande Prairie Downtown Road Hierarchy Comparison Matrix (Urban Zone)





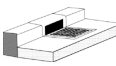








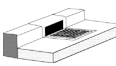




PROPOSED STREET HIERARCHY	 ROAD NAME	 R.O.W. WIDTH	 DRIVE LANES	 ON-STREET PARKING	 CURB CONDITION	 PERCENT ROADWAY	 LANDSCAPE ZONE WIDTH	 SIDEWALK WIDTH	 BIKE LANES
<b>SHARED AVENUE</b>	101st AVENUE	±20.00m	2 LANES @ 3.5m	2 LANES @ 3m; ENHANCED PAVING; SHARED WITH PEDESTRIANS	TRENCH DRAIN W/ BOLLARDS	35% (30% SHARED)	1.80m URBAN BOTH SIDES	1.70m SW BOTH SIDES	NONE
<b>URBAN AVENUE</b>	100th AVENUE	±20.00m	2 LANES @ 3.5m; ONE WAY	2 LANES @ 3m; ENHANCED PAVING	RAISED	65%	1.30m URBAN BOTH SIDES	1.70m SW BOTH SIDES	NONE
<b>TRANSITIONAL AVENUE</b>	99th AVENUE	±23.60m	3 LANES @ 3.5m; ONE WAY	2 LANES @ 3m; ENHANCED PAVING	RAISED	70%	1.56m URBAN BOTH SIDES	1.50m SW BOTH SIDES	NONE
<b>URBAN ARTERIAL STREET</b>	100th STREET; 98th STREET (south of 101 ave / north of 99 ave)	±25.00m (VARIES)	4 LANES @ 3.5m	NONE	RAISED	56%	4.00m ISLAND; 1.50m URBAN BOTH SIDES	1.50m SW BOTH SIDES	NONE
<b>URBAN COLLECTOR STREET</b>	102nd STREET (south of 101 ave / north of 99 ave)	±30.00m	4 LANES @ 3.5m	2 LANES @ 3m; NO PAVING SEPARATION	RAISED	67%	2.00m URBAN BOTH SIDES	2.50m SW BOTH SIDES	NONE
<b>URBAN CONNECTOR STREET</b>	99th STREET; 101st STREET (south of 101 ave / north of 99 ave)	±21.00 - 24.00m	2 LANES @ 3.5m	2 LANES @ 3m; ENHANCED PAVING	RAISED	54%	±2.00m URBAN BOTH SIDES	± 3.00m SW BOTH SIDES	NONE

Table 3: Grande Prairie Downtown Road Hierarchy Comparison Matrix (Standard Zone)

PROPOSED STREET HIERARCHY	 ROAD NAME	 R.O.W. WIDTH	 DRIVE LANES	 ON-STREET PARKING	 CURB CONDITION	 PERCENT ROADWAY	 LANDSCAPE ZONE WIDTH	 SIDEWALK WIDTH	 BIKE LANES
<b>RESIDENTIAL AVENUE</b>	102nd AVENUE	±30.00m	2 LANES @ 3.5m	2 LANES @ 3m; NO PAVING SEPARATION	RAISED	43%	4.50m PLANTING BOTH SIDES	2.00m SW BOTH SIDES	2.00m RAISED BIKE LANE BOTH SIDES
<b>STANDARD ARTERIAL STREET</b>	100th STREET; 98th STREET (north of 101 ave / south of 99 ave)	±25.00m (VARIES)	4 LANES @ 3.5m	NONE	RAISED	56%	4.00m ISLAND; 1.50m SOD BOTH SIDES	1.50m SW BOTH SIDES	NONE
<b>STANDARD COLLECTOR STREET</b>	102nd STREET (north of 101 ave / south of 99 ave)	±30.00m	4 LANES @ 3.5m	2 LANES @ 3m; NO PAVING SEPARATION	RAISED	67%	2.00m SOD BOTH SIDES	2.50m SW BOTH SIDES	NONE
<b>STANDARD CONNECTOR STREET</b>	99th STREET; 101st STREET (north of 101 ave / south of 99 ave)	±21.00 - 24.00m	2 LANES @ 3.5m	2 LANES @ 3m; ENHANCED PAVING	RAISED	54%	±2.00m SOD BOTH SIDES	±3.00m SW BOTH SIDES	NONE
<b>BASIC LOCAL UPGRADE</b>	98th AVENUE; 97th AVENUE; MONTROSE AVENUE; 97A; 97th STREET; 102nd STREET	±20.00m (VARIES)	2 LANES @ 3.5m	2 LANES @ 3m; NO PAVING SEPARATION	RAISED	65%	1.50m SOD BOTH SIDES	1.50m SW BOTH SIDES	NONE

## 6.3.2 Urban Street ROW Components

### *Urban Avenue*

100th Avenue (Richmond Avenue) can be designated as an Urban Avenue and, located in the **Urban Zone**, can function as the pedestrian focal point of the city. Due to its narrow public ROW width of  $\pm 20$  metres, road components can be rebalanced to give priority to the urban pedestrian experience and to allow for appropriate street tree growing conditions in planters and continuous tree pits, as shown in Figure 25. The pedestrian zone can effectively increase from  $\pm 3.80$  to  $\pm 4.00$  metres, including the space between property line and building facade.

The road itself will maintain two westbound vehicular lanes and two parking lanes on either side, however drive lanes can be reduced in size from 3.70 to 3.50 metres each. This is a standard width throughout Alberta that can comfortably accommodate large trucks.

On-street parking can be separated by a flush curb and enhanced paving treatment. This urban condition can also provide opportunities for bump-outs (i.e., widening of sidewalk at crossings) to allow for increased gathering spaces and planting zones, as well as mid-block crossing points that reduce the cross road walking distance, thereby enhancing safety.

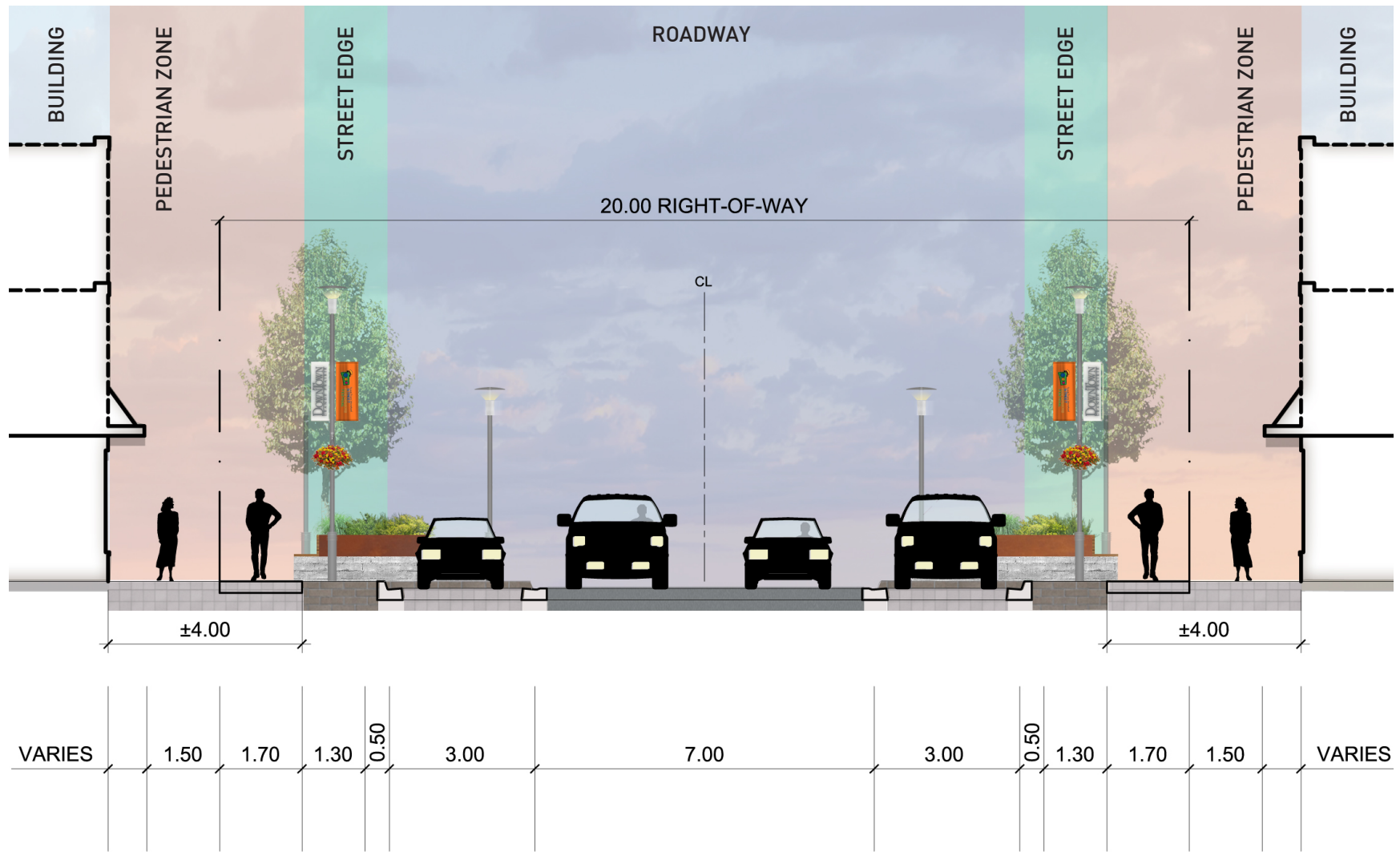


Figure 25: 100th Avenue Urban Streetscape ROW Cross Section

0 25 75m

## **Shared Avenue**

101st Avenue can be designated as a Shared Avenue, functioning as a shared festival road and the cultural hub of the downtown. Located in the **Urban Zone**, it will be enhanced by its proximity to the farmers' market and Montrose site. Like 100th Avenue, its narrow public ROW width of  $\pm 20$  metres requires the rebalancing of street components to give priority to the urban pedestrian experience and to allow for appropriate street tree growing conditions in continuous tree pits, as shown in Figure 26.

The road will maintain two-way vehicular lanes and two parking lanes on either side, however drive lanes can be reduced in size from 3.70 to 3.50 metres each.

On-street parking can be separated by a flush curb, however the paving treatment can continue across the entire width of the streetscape, from facade to facade, to blur the lines between the pedestrian and vehicular realms. According to Project for Public Spaces (PPS), the notion is that the absence of standard street components "forces all users of the space...to negotiate passage...via eye contact and person to person negotiation" (2014).

With a continuous trench drain condition in place of curbs, the only vertical divide between cars and pedestrians would be bollards, allowing people to filter into the street during special events or festivals, during which times the street can be entirely closed to vehicles or simply just to on-street parking.

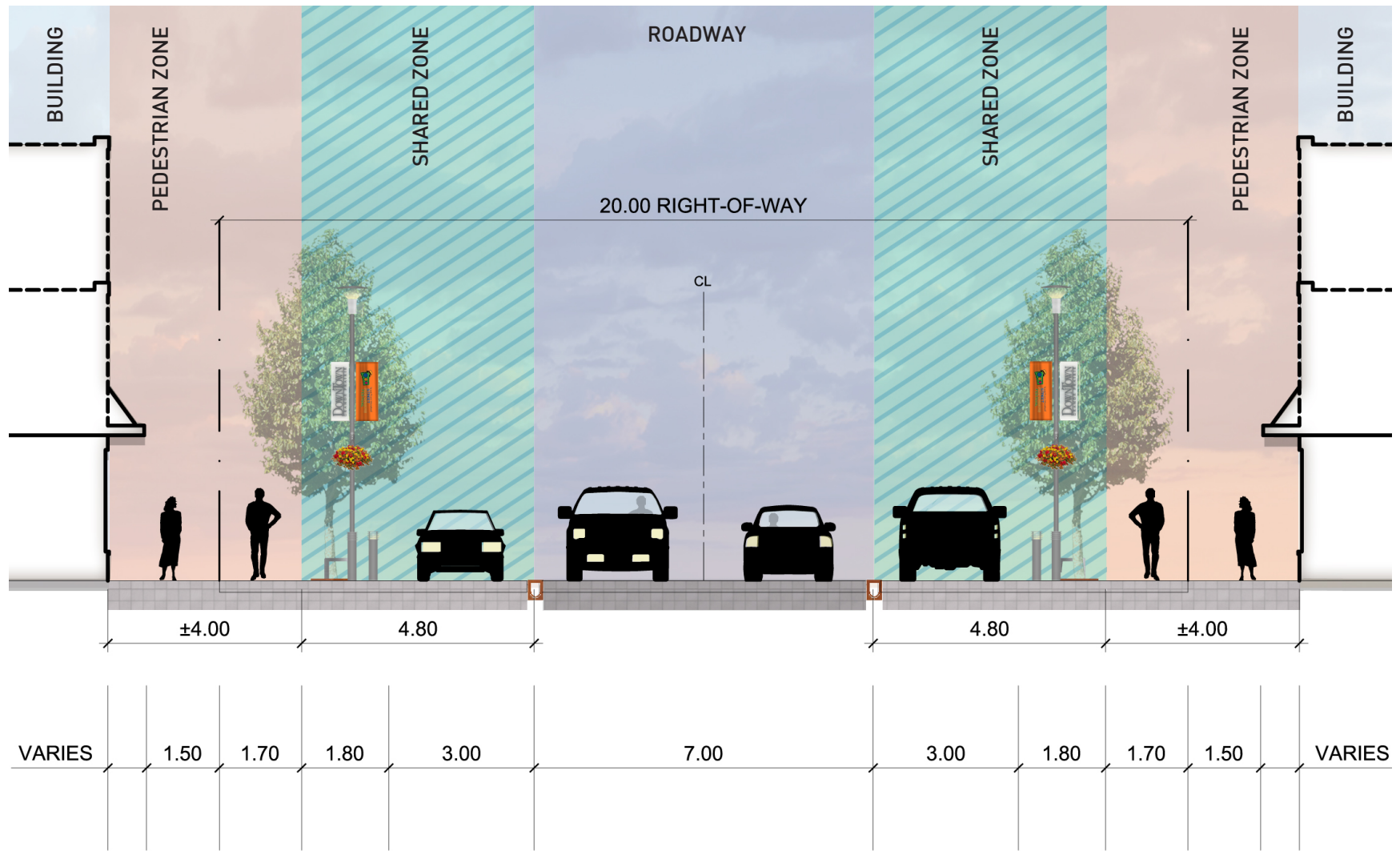


Figure 26: 101st Avenue Shared Festival Street ROW Cross Section

0 25 75m

## *Transitional Avenue*

99th Avenue, located in the **Urban Zone**, can be designated as a Transitional Avenue due to the future redevelopment opportunities afforded by its lack of density and somewhat wider ROW of  $\pm 23.60$  metres. See Appendix G for a demonstration plan and cross section.

Assuming development remains the same for now, the sidewalk width can be 1.50 metres on either side and the landscape zone width can be 1.56 metres on either side, allowing for improved pedestrian realm and street tree growing conditions in continuous tree pits. However, as redevelopment occurs, there is an opportunity to gain back more public realm in key locations in exchange for compromises, such as increased building height or density.

The road itself can maintain three eastbound vehicular lanes and two parking lanes, however drive lanes can be reduced in size from 3.70 to 3.50 metres each. As infill development takes place and traffic patterns change over time, there may be an opportunity to remove one of the three eastbound drive lanes and add a separated two-way bike lane as the major east-west cycle route through the downtown.

On-street parking can be separated by a flush curb and enhanced paving treatment, which may also provide opportunities for bump-outs and mid-block crossing points in key locations, as future redevelopment occurs.

## *Urban Arterial Street*

100th Street and 98th Street, south of 101st Avenue and north of 99th Avenue, located in the **Urban Zone**, can be designated as Urban Arterial Streets. See Appendix G for a demonstration plan and cross section.

The  $\pm 25$  metre ROWs can be urban in nature, with landscaped islands, grated tree pits, and 1.50 metres of sidewalk on either side. The streets will maintain two northbound and two southbound vehicular lanes with no on-street parking, however drive lanes can be reduced in size from 3.70 to 3.50 metres each to give priority to the urban pedestrian experience.

## *Urban Collector Street*

102nd Street, south of 101st Avenue and north of 99th Avenue, located in the **Urban Zone**, can be designated as an Urban Collector Street. See Appendix G for a demonstration plan and cross section.

At  $\pm 30$  metres in width, the ROW can be urban in nature, with grated tree pits and 2.50 metres of sidewalk on either side. The street will maintain two northbound and two southbound vehicular lanes with two lanes of standard on-street parking, however drive lanes can be reduced in size from 3.70 to 3.50 metres each to give priority to the urban pedestrian experience.

### **Urban Connector Street**

99th Street and 101st Street, south of 101st Avenue and north of 99th Avenue, located in the **Urban Zone**, can be designated as Urban Connector Streets, due to their functionality in connecting pedestrians from the north and south to the heart of the downtown. See Appendix G for a demonstration plan and cross section.

At  $\pm 21$  to 24 metres in width, the ROWs can be urban in nature, with grated tree pits and  $\pm 3.00$  metres of sidewalk on either side to strengthen the urban pedestrian experience. The streets will maintain one northbound and one southbound vehicular lane, and two lanes of on-street parking with enhanced paving treatment. Drive lanes can be reduced in size from 3.70 to 3.50 metres each.

## **5.3.3 Standard Street ROW Components**

### **Residential Avenue**

102nd Avenue, located in the **Standard Zone**, can be designated as a Residential Avenue due to existing and proposed surrounding land uses. See Appendix G for a demonstration plan and cross section.

At  $\pm 30$  metres in width, the ROW has the opportunity to incorporate elements that can not be accommodated in some of the narrower ROWs without compromising the functionality

of their streetscapes. The Residential Avenue can have dedicated bike lanes on both sides of the road, due to its natural east-west connection through the downtown, from City Hall and the Montrose Site to Jubilee and Muskoseepi Parks. The bike lanes can be raised and separated from traffic to enhance a sense of safety, and may also serve as a means to test demand for a dedicated cycling network in Grande Prairie.

Being in the **Standard Zone**, the Residential Avenue can have landscaped tree planting zones of 4.50 metres and 2.00 metres sidewalks on either side. The road will maintain one eastbound and one westbound vehicular lane, and two lanes of standard on-street parking. Drive lanes can be reduced in size from 3.70 to 3.50 metres each.

### **Standard Arterial Street**

100th Street and 98th Street, north of 101st Avenue and south of 99th Avenue, located in the **Standard Zone**, can be designated as Standard Arterial Streets. See Appendix G for a demonstration plan and cross section.

The  $\pm 25$  metre ROWs can include landscaped islands, sodded tree planting zones, and 1.50 metres of sidewalk on either side. The streets can maintain two northbound and two southbound vehicular lanes with no on-street parking, and drive lanes can be reduced in size from 3.70 to 3.50 metres each.

### *Standard Collector Street*

102nd Street, north of 101st Avenue and south of 99th Avenue, located in the **Standard Zone**, can be designated as a Standard Collector Street. See Appendix G for a demonstration plan and cross section.

The  $\pm 30$  metre ROW can include sodded tree planting zones and 2.50 metres of sidewalk on either side. The street can maintain two northbound and two southbound vehicular lanes with two lanes of standard on-street parking, and drive lanes can be reduced in size from 3.70 to 3.50 metres each.

### *Standard Connector Street*

99th Street and 101st Street, north of 101st Avenue and south of 99th Avenue, located in the **Standard Zone**, can be designated as Standard Connector Streets due to their functionality in connecting pedestrians from the north and south to the heart of the downtown. See Appendix G for a demonstration plan and cross section.

At  $\pm 21$  to 24 metres in width, the ROWs can include sodded tree planting zones and  $\pm 3.00$  metres of sidewalk on either side to strengthen the connective pedestrian experience. The streets can maintain one northbound and one southbound vehicular lane, reduced in size from 3.70 to 3.50 metres each, and two lanes of standard on-street parking.

### *Basic Local Upgrade*

All local roads within the downtown enhancement area, including 98th Avenue, 97th Avenue, Montrose Avenue, 97A Street, 97th Street, and 102nd Street, can be designated as Basic Local Upgrades. See Appendix G for a demonstration plan and cross section.

Varying from  $\pm 20$  metres in width, the ROWs can include sodded tree planting zones and 1.50 metres of sidewalk on either side. These roads can maintain the existing flow of traffic, with drive lanes reduced in size from 3.70 to 3.50 metres each, and two lanes of standard on-street parking.

## 5.3.4 Street Upgrade Implementation Recommendations

- As part of the streetscape upgrades, implement a hierarchy for roads within designated zones.
- In addition to the recent Community Mobility Plan, complete a downtown mobility/transportation assessment plan as part of the streetscape implementation process to mitigate the impacts of downtown road closures during construction, as well as during future events and festivals.
- Complete a cycling study to establish demand for, and feasibility of, a dedicated cycling network throughout the city.
- As redevelopment occurs, encourage the expansion of public realm in key areas by gaining back ROW from developers through purchase or height/density trade-offs.

## 6.4 Creating a Cultural Landscape

### 6.4.1 Theme Inspiration & Material Palette

An essential requirement in the enhancement of a unified downtown is the establishment of a streetscape design theme. This theme should reflect the best of Grande Prairie, while at the same time promoting its modernization and vitality.

Grande Prairie was named for the vast tracts of prairie that lie east, west, and north of the city. These lands were central to the conception of Grande Prairie as settlers came to the area in search of fertile farmland. To this day, the surrounding agricultural prairie remains a strong economic pillar for the region. Oil and gas activity is now widely recognized as an economic driver, and the region is home to a wide range of other industries, including forestry, retail, and manufacturing.

As a unifying force between Grande Prairie's history and future growth, the streetscape design theme should reflect elements of both, while retaining a design integrity of its own. A palette of materials and tones is proposed to transform Grande Prairie's downtown into a modern and dynamic reflection of its character.

Industrial materials, such as steel, wood, and concrete, are meant to represent the different industries that built Grande Prairie. Due to harsh winter conditions, durable outdoor materials have been selected – high density paper composite instead of natural wood; corten steel; stainless steel; concrete; and polycarbonate panels (Figure 27).

The choice of stainless steel in the material palette is about modernizing the downtown streetscape, while “wood” textures provide more natural accents and represent the city's major forestry industry.

Viewing the landscape from above, the prairie tracts portray a unique mosaic of warm colours, which inspire the choice of beige and brown concrete paving tones. These warm pavers can also provide a contrast against the industrial metal tones and cold colours of winter.

Overall, the material and colour palette can serve as a visual connection to Grande Prairie's roots in agriculture and the state of its existing industry.

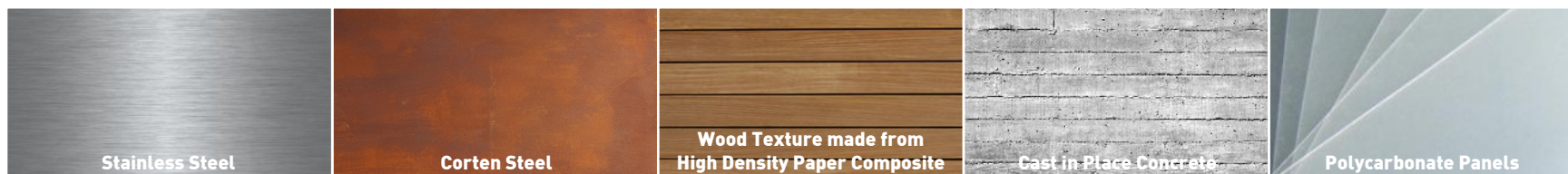


Figure 27: Proposed Material Palette

## 6.4.2 Streetscape Kit of Parts

Together with the proposed downtown street hierarchy (Figure 28), the streetscape kit of parts is a fundamental component toward the realization of the downtown vision. Each piece in the kit of parts will come together to enhance the urban, modern, unique, attractive, walkable, cultural, and active downtown the community has envisioned.

The kit of parts features are organized into five categories - lighting, street furniture, planting, paving, and transitional components - and will be designed with variation that corresponds to the unified yet unique conditions of the **Urban** and **Standard** Zones (Figure 29). As its name suggests, the **Standard Zone** can incorporate urban design features of a more basic nature, that still tie into the unified downtown theme. The **Urban Zone** can comprise many more features that amplify its presence as the metropolitan heart of the city.

Table 4 displays the distribution of streetscape features on each of the colour-coded downtown streets throughout the **Urban** and **Standard** Zones. The features are further described, and visually demonstrated, in the subsections that follow.

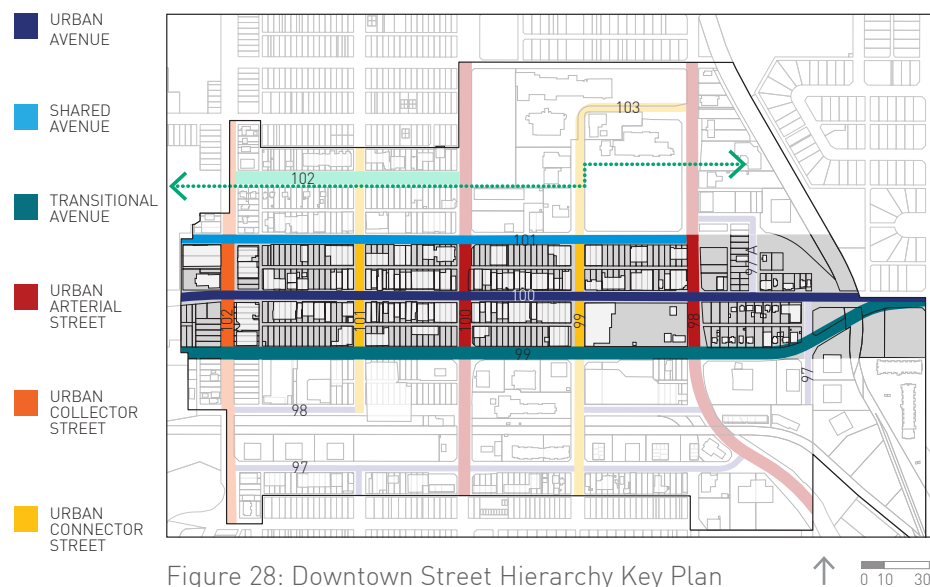


Figure 28: Downtown Street Hierarchy Key Plan

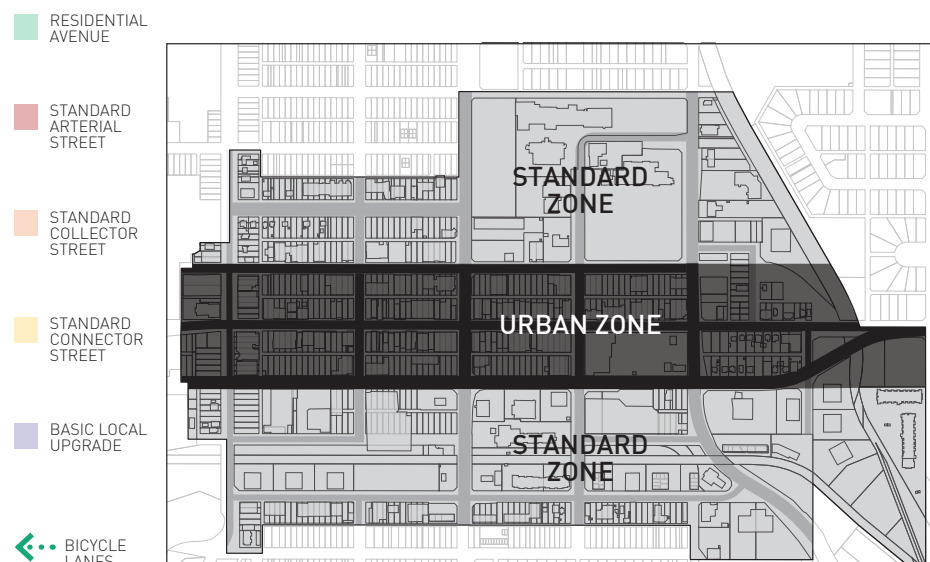


Figure 29: Downtown Kit of Parts Zones

Table 4: Streetscape Kit of Parts Hierarchy

	Lights w/ Banners	Flower Baskets	Pedestrian Lights	Standard Lights	Bollards	Signage & Wayfinding	Urban Benches	Park Benches	Bike Racks	Waste Receptacles	Open Planters	Grated Tree Pits	Boulevard Planting	Enhanced Sidewalks & Crosswalks	Shared Street	Enhanced On-Street Parking	Dedicated Bike Lanes	Seasonal Elements	Cultural Features
URBAN ZONE KIT OF PARTS																			
STANDARD ZONE KIT OF PARTS																			

## Lighting



### Street Lights with Banners

Single lamp street lights with banners can be located along the north-south streets within the **Urban Zone** - Urban Arterials, Urban Collector, and Urban Connectors.

The stainless steel material, and modern lamp and signage forms can aid in updating the downtown, enhancing its desirability for future redevelopment. The banners can help to establish a unified downtown theme, as well as provide opportunities to advertise various city events, such as the Street Performers' Festival.



### Street Lights with Flower Baskets & Banners

Double lamp street lights with flower baskets and banners can be located along the special east-west streets within the **Urban Zone** - Shared Avenue, Urban Avenue, and Transitional Avenue.

During the warmer months, the flower baskets can bring colour, life, and variety to the urban east-west avenues. During the colder months, the brackets can be used to hang seasonal decorations or additional lighting. As mentioned above, the banners can help to establish a unified downtown theme, as well as provide promotional opportunities.





### Pedestrian Street Lights

Pedestrian street lights can be located in the **Urban Zone** on the Shared Avenue, Urban Avenue, and Transitional Avenue, as they are the most urban in character.

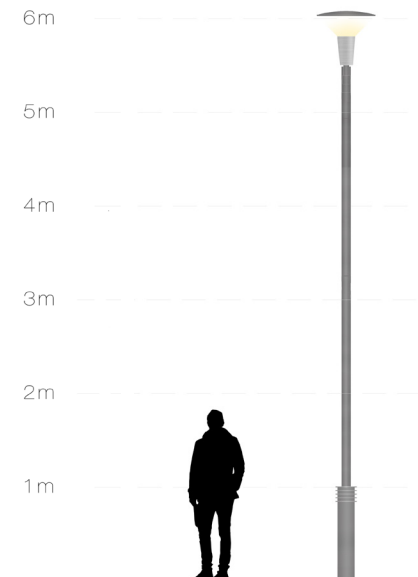
The pedestrian lights can be used to define key pedestrian areas along the streets, such as mid-block crossings, enhanced intersections, plazas, and seating areas.



### Standard Street Lights

Single lamp street lights without banners or baskets can be located along all downtown street within the **Standard Zone** - Residential Avenue, Standard Arterial Streets, Standard Collector Street, Standard Connector Streets, and Basic Local Upgrades.

The stainless steel material and modern lamp form can aid in updating the less urban streets, while at the same establishing a unified character that permeates out from the central Urban Zone.



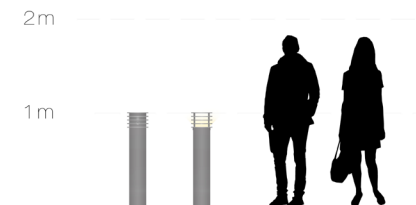
## Street Furniture



### Bollards

Bollards can be located in the **Urban Zone** on the Shared Avenue, Urban Avenue, and Transitional Avenue, as they are the most urban in character. The bollards can also have an illuminated option.

On the Shared Avenue, the bollards can serve as informal barriers between cars and pedestrians for the entire length of the street. On the Urban and Transitional Avenues, the bollards can be located at enhanced mid-block crossings and intersections.



### Signage & Wayfinding

Various signage and wayfinding features can be located in the **Urban Zone** on the Shared Avenue, Urban Avenue, Transitional Avenue, Urban Arterials Streets, Urban Collector Street, and Urban Connector Streets in order to direct pedestrians and drivers to key locations in the heart of the downtown.

The signage family can be made up of directional poles, public parking signs, sub-area identification and/or business signs, and pedestrian-scaled maps, among others, and can be constructed using a selection of materials from the streetscape palette, such as poured concrete, stainless steel, corten steel, and/or polycarbonate panels.

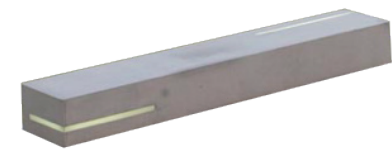




## Urban Benches

Urban style benches constructed with a poured concrete base and the option of a high density paper composite (HDPC) seat can be located in the **Urban Zone** along the special east-west streets - Shared Avenue, Urban Avenue, and Transitional Avenue.

These benches can offer variety within the streetscape as they can be simple poured concrete forms, or have an HDPC seat, with or without a backrest. The HDPC material is manufactured in North America from FSC certified recycled paper and requires little to no maintenance.



Illuminated Poured Concrete Bench



Poured Concrete & HDPC Bench



## Park Benches

Park benches with simple stainless steel legs and an HDPC seat can be located along the north-south streets within the **Urban Zone** - Urban Arterials, Urban Collector, and Urban Connectors, as well as some of the more travelled streets in the **Standard Zone** - Residential Avenue (as it includes bike lanes), Standard Arterial Streets, Standard Collector Street, and Standard Connector Streets.

The more traditional bench with backrest can be placed in downtown parks (e.g., Jubilee Park, Montrose Site) and along the **Standard Zone** streets, while the backless bench can be located along the north-south **Urban Zone** streets.



HDPC Park Benches



### Bike Racks

Simple stainless steel bike racks can be placed along all streets within the **Urban Zone** to encourage cycling and gauge demand for future dedicated bike lanes in the downtown.



In the **Standard Zone**, bike racks can be provided along the Residential Avenue, as it includes bike lanes, and the Standard Arterial Streets, as they connect the downtown to a greater city network, north and south.



Bike Rack



### Waste & Recycling Receptacles

Simple stainless steel and HDPC waste and recycling receptacles can be located along streets in both the **Urban Zone** and the **Standard Zone** to encourage a clean city.



With a slender profile, the waste and recycling receptacles can efficiently fit in the narrow street ROWs.



HDPC Garbage & Recycling Receptacles

## Planting



### Open Planters

Poured concrete open planters can be located in the **Urban Zone** - Urban Avenue, Shared Avenue, and Transitional Avenue. Along the Urban Avenue and Transitional Avenue, these planters can be located within the mid-block crossings and enhanced intersections. Along the Shared Avenue, locations of the open planters have the opportunity to be varied due to the introduction of a shared street scheme and the flexibility that it offers.

Open planters contribute to the aesthetics of the streetscape and enhance the overall planting environment. They can also provide several other functions, in addition to planting various tree species and plants. The introduction of a curb opening with runoff channel from the road to the planter helps capture and temporarily store stormwater. Furthermore, incorporating an HDPC seat provides additional seating along each street.

Due to the northern climate of Grande Prairie, it is not uncommon that low winter temperatures or early frost results in severe winterkill. In order to have a streetscape full of healthy plants, a variety of species should be considered that are appropriate for hardiness zone 2b.



Poured Concrete Planter



Runoff Channel to Planter



Seating Addition to Planter



### Grated Tree Pits

Natural cast iron tree grates can be placed along all streets within the **Urban Zone**. Single rectangular tree grates can be located on the Urban Arterials, Urban Collector, and Urban Connectors. A series of rectangular tree grates over a continuous tree trench can be located on the Urban Avenue, Shared Avenue, and Transitional Avenue.

Continuous tree grates comprising groups of three to five trees, hardy to zone 2b, along the Urban Avenue, Shared Avenue, and Transitional Avenue, help distinguish these streets as major corridors and add variety to the overall streetscape. Having a larger, continuous tree pit also helps to ensure healthy urban growing conditions with less soil compaction.



Continuous Tree Grate



Rectangular Cast Iron Tree Grate



Continuous Cast Iron Tree Grate



## Boulevard Planting

Basic boulevard planting can be located along all downtown streets within the **Standard Zone** - Residential Avenue, Standard Arterial Streets, Standard Collector Street, Standard Connector Streets, and Basic Local Upgrades.

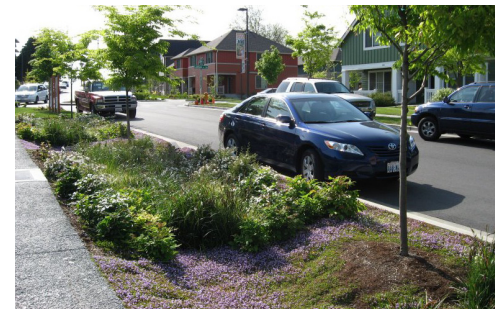
Planted boulevards along these streets beautify the streetscape and assist in controlling stormwater runoff. They provide separation between the vehicular thoroughfare and sidewalks, as well as inform street users of their transition out from the central Urban Zone. The boulevards can consist of planted trees with a combination of lawn, gardens, or bioswales, all hardy to zone 2b.



Lawn Boulevard



Garden Boulevard



Bioswale Boulevard

## Paving



### Enhanced Sidewalks & Crosswalks

Enhanced sidewalk and crosswalk paving can be located along streets within the **Urban Zone** - Urban Avenue, Shared Avenue, Urban Arterials, Urban Collector, and Urban Connectors. The Transitional Avenue in the **Urban Zone** and streets in the **Standard Zone** - Residential Avenue, Standard Arterials, Standard Collector, and Standard Connectors - can utilize poured concrete sidewalks and unit paver crosswalks.

Along 100th Avenue, the sidewalks and on-street parking stalls can primarily consist of unit pavers with larger paving bands that span from the edge of the building face to the back edge of the flush curb on the roadway. Sidewalk unit pavers and the corresponding banding can continue through the roadway at each intersection and mid-block bump-out, forming crosswalks complete with tactile pavers for improved accessibility. Continuing this paving theme throughout the streetscape can enhance the urban pedestrian experience.

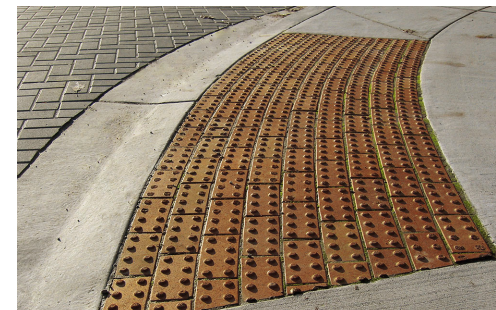
The Shared Avenue (101st Avenue) can have the same unit pavers and corresponding paving bands pattern as 100th Avenue, but can instead span the entire width of the street. This establishes the notion of “blurring the lines” between pedestrian sidewalk and vehicular thoroughfare - a fundamental principle when designing for a shared street scheme.



Unit Paver Banding on Sidewalks & Crosswalks



Continuous Unit Paver Banding



Tactile Indicator Pavers at Crosswalks



### Enhanced On-Street Parking

Enhanced paving for on-street parking can be located within the **Urban Zone** on the Urban Avenue, Transitional Avenue, and Urban Connector Streets to help strengthen the pedestrian realm by establishing a textural divide between pedestrians and vehicles moving along the asphalt travel lanes. The Shared Avenue can incorporate an enhanced paving pattern that spans the entire width of the street, including the on-street parking lanes. The use of continuous trench drains along these parking lanes can help to define the vehicular travel paths, while at the same time collecting stormwater runoff.

This enhanced on-street parking treatment could be constructed from unit pavers, poured concrete, or a combination of both materials. The on-street parking textures can be one of the many components that help distinguish the urban streets in the heart of the downtown.



Continuous Trench Drain Separation



Concrete Separated On-Street Parking



Paver Separated On-Street Parking



## Shared Street

A shared festival street, extending east-west along 101st Avenue (Shared Avenue) within the **Urban Zone**, can serve as a unique streetscape for locals and tourists to experience and celebrate the vitality of the City of Grande Prairie.

Shared Streets are distinguishable through the introduction of a curbless streetscape with a uniform paving pattern throughout. The primary motivation behind the use of these schemes is to reduce the impact of the vehicle within the street, thereby providing a more pedestrian oriented environment.

101st Avenue can serve as an ideal shared street as it does not experience the heavy vehicular traffic of the other east-west Urban Zone streets (100th Avenue and 99th Avenue). With a fairly narrow ROW width of  $\pm 20$  metres, a shared street scheme is appropriate as it provides more flexibility to accommodate both pedestrian and vehicle use. A shared street can offer expanded areas for on-street parking and patio space for restaurants and cafes during festivals. Other events can easily be accommodated as the flexibility of the space provides opportunity for activities, amenities, and recreation.

Shared street schemes usually require a lower speed limit (30-50km/h) in order to achieve a more pedestrian friendly environment. Therefore, a conversation would need to be had amongst Council and City Staff regarding possible speed reductions.



Uniform Streetscape



On-Street Parking



20mph ( $\pm 32$ km/h) Speed Limit

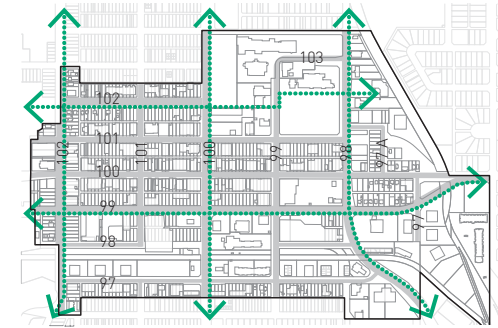


## Dedicated Bike Lanes

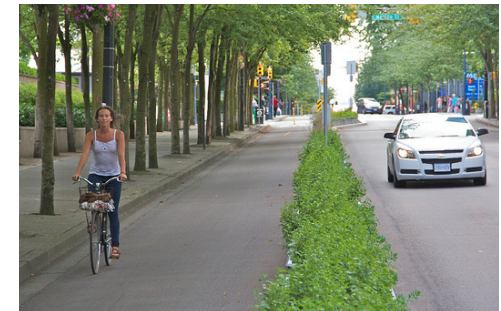
Dedicated bike lanes can be located within the **Standard Zone** on either side of the Residential Avenue (102nd Avenue) due to its natural east-west connection through the downtown, from City Hall and the Montrose Site to Jubilee and Muskoseepi Parks, as well as its considerable ROW width of  $\pm 30$  metres. The bike lanes can be raised asphalt, marked and separated from traffic by a planting strip to enhance the sense of safety. They may serve as a means to test the residents' appetite for a dedicated cycling network in Grande Prairie.

Due to the narrow ROW width of the other downtown streets ( $\pm 20$ -25m), to construct additional bike lanes would require better sharing of the street through the reduction of drive aisles, parking lanes, pedestrian realm, or landscape area. This decision will have to be made by Council once studies have been undertaken to establish the demand for and feasibility of a dedicated cycling network throughout the city.

Recommended locations for additional bike lanes would be along major north-south streets, such as the Arterials and/or Collector (102nd, 100th, and 98th Streets), as they connect major open spaces to the greater city network. The Transitional Avenue (99th Avenue) may also be an appropriate street for a two-way bike lane should future demand not require three eastbound vehicular lanes. Designated on-street bike routes may also be an option in some areas, in lieu of dedicated lanes.



Potential Future Cycling Network



Separated Bike Lane with Landscape Strip



Separated Bike Lane with Concrete Curb

## Transitional Components



### Seasonal Elements

With the Grande Prairie climate in mind, it will be important to incorporate flexible seasonal elements into the streetscape to enhance the downtown environment, especially during low light and winter weather conditions.

Within the **Urban Zone**, on the Shared, Urban, and Transitional Avenues, there can be opportunities to hang seasonal decorations from the street light brackets, as well as to string lights or banners across the streets from light pole to light pole. This treatment can engage the eye, adding light, colour, and warmth to the streetscape during bleak conditions.

The DEP includes policies that suggest the incorporation of solar heat trap structures at key locations, such as enhanced intersections with corner bump-outs. These structures would be designed with a selection of materials from the streetscape palette (e.g. stainless steel, concrete, polycarbonate panel), and act as solar heat traps or wind breaks during the cold season and shade structures during warmer months. They can also support future downtown transit expansions, functioning as transit shelters at key locations.



Decorated Street Lights



Cross Street Christmas Lighting



Solar Trap / Windbreak Structures



## Cultural Features

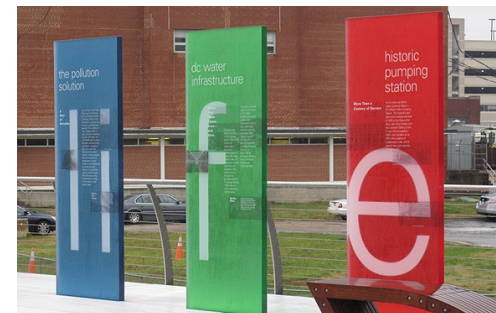
To celebrate the historic and cultural vitality of Grande Prairie, various cultural features, such as heritage monuments and transitional public art, can be incorporated into the urban streetscape. At the onset of downtown enhancement, these features can be located within the **Urban Zone**, at key locations on the Shared, Urban, and Transitional Avenues, as they will be the most travelled streets. However, as redevelopment occurs, cultural features can permeate out from the heart of the downtown, creating interest in the less urban areas.

Cultural monuments do not necessarily have to be historic or permanent. They can reflect the past, present, and/or future of Grande Prairie, and can be interchanged as the downtown grows and adapts. They provide opportunities to artistically display the city's culture.

Public art is a vital ingredient in the cultural fabric and streetscape of attractive downtowns and contributes to the enhancement of great places. A modernizing downtown holds perfect opportunities for the incorporation of art that can be both enjoyed by the public and created by the public, encouraging a sense of community ownership. **Public art installations can be located in key locations, such as the gathering spaces created in the mid-block bump-outs on 100th Avenue, and can add flexibility and interactivity to the streetscape.**



Public Art Reflecting Cultural Heritage



Interchangeable Monuments Reflecting Culture



Transitional Interactive Public Art

## 6.4.3 Concept & Demonstration Plans

### *Urban Upgrade Opportunity Areas*

In addition to the various streetscape features proposed within the kit of parts, the **Urban Zone** within Grande Prairie's downtown also lends itself to a number of upgrade opportunities that may be further developed at the detailed design level. Such opportunities include gateways into the downtown, intersection upgrades, mid-block crossings, and urban infill, as shown in Figure 30.

Downtown gateway features should be located in two areas:

1. On 100th Avenue (Richmond Avenue) coming into the downtown from the east; and
2. On 99th Avenue coming into the downtown from the west.

These features do not have to be "gateways" in the literal sense. For example, the 100th Avenue entrance feature could be a prominent architectural expression, seen from a distance when travelling westbound into the downtown. While the 99th Avenue feature, viewed when travelling eastbound into the downtown, could be more landscape focused due to its proximity to Muskoseepi Park.

Twelve intersection upgrades can occur along 101st Avenue, 100th Avenue, and 99th Avenue at the intersections of 98th

street, 99th Street, 100th Street, and 101st Street. These upgrades can include the incorporation of small bump-outs to decrease the crosswalk distance, as well as to provide additional area for pedestrian use and gathering space. Demonstrations of how the intersections could be detailed are included in the subsections that follow.

Four mid-block crossings can be established along 100th Avenue, within the four main blocks. These zones can function as traffic calming measures, safe crossing points, and additional gathering spaces. Demonstrations of how the mid-block crossings could be detailed are included in the figures that follow.

Both 99th and 101st Avenues present ample opportunities for redevelopment due to the abundance of surface parking along their street frontages. As streetscape improvements take place within the **Urban Zone**, these streets may become more and more desirable for urban infill development. This may, in turn, result in opportunities to enhance the public realm in key locations and introduce mid-block crossings along 99th and 101st Avenues in the future.

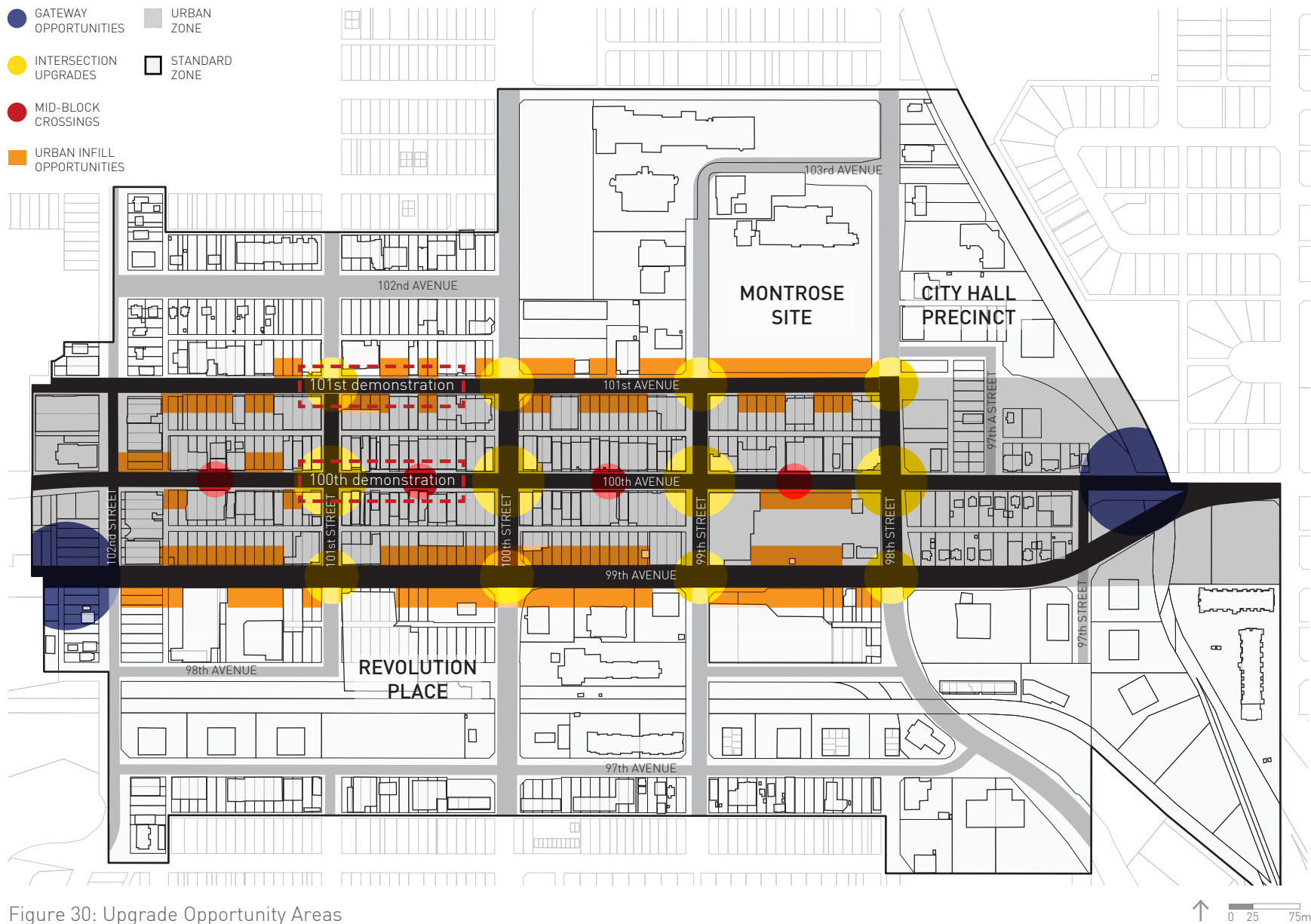


Figure 30: Upgrade Opportunity Areas

## 100th Avenue Concept Demonstration

The demonstration concept plan for 100th Avenue (Figure 31) takes into consideration the vision and objectives, which focus on establishing a more predominate pedestrian public realm, while still accommodating vehicular interests.

A dynamic pattern of unit paving bands that extend throughout the sidewalk, on-street parking spaces, and crosswalks make for a more attractive environment that can unify the entire downtown streetscape. Tree planting clusters on continuous tree grates can help to frame the street and enhance the overall aesthetics. The addition of concrete open planters can delineate where on-street parking occurs, provide additional seating, and offer stormwater capture opportunities.

The addition of bump-outs at the intersections (Figure 32) and mid-block crossing areas (Figures 33 & 35) provide shorter crossing distances, physically and visually slow vehicular traffic, and allow for additional public space. Specifically, the mid-block crossing spaces provide opportunities to establish intimate pocket plazas for community gathering areas, performances and events, and passive seating. Mid-block bump-outs on the north side of the street can be expanded in size to take advantage of greater solar exposure. Bump-outs at the intersections help the junctions become more pedestrian oriented and add additional space for street furnishings, such as gateway features, wayfinding signage, seating, and solar traps. Figures 34 & 35 demonstrate the 100th Avenue pedestrian experience.

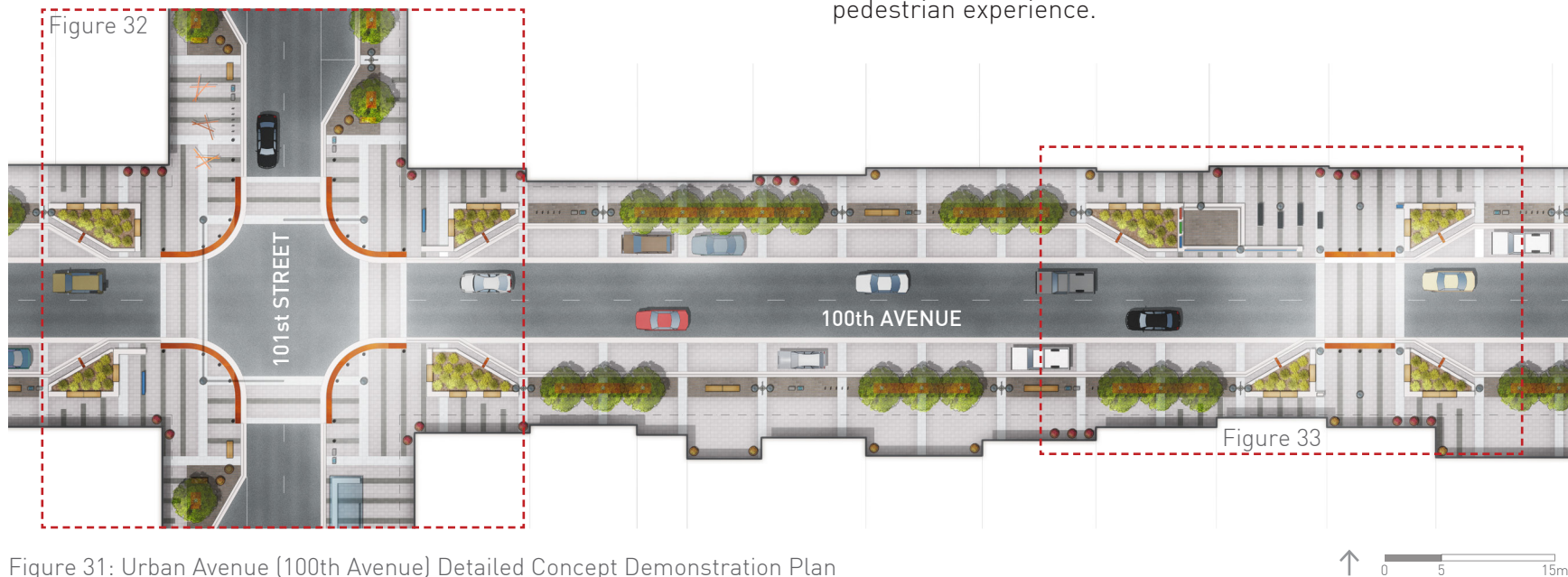


Figure 31: Urban Avenue (100th Avenue) Detailed Concept Demonstration Plan

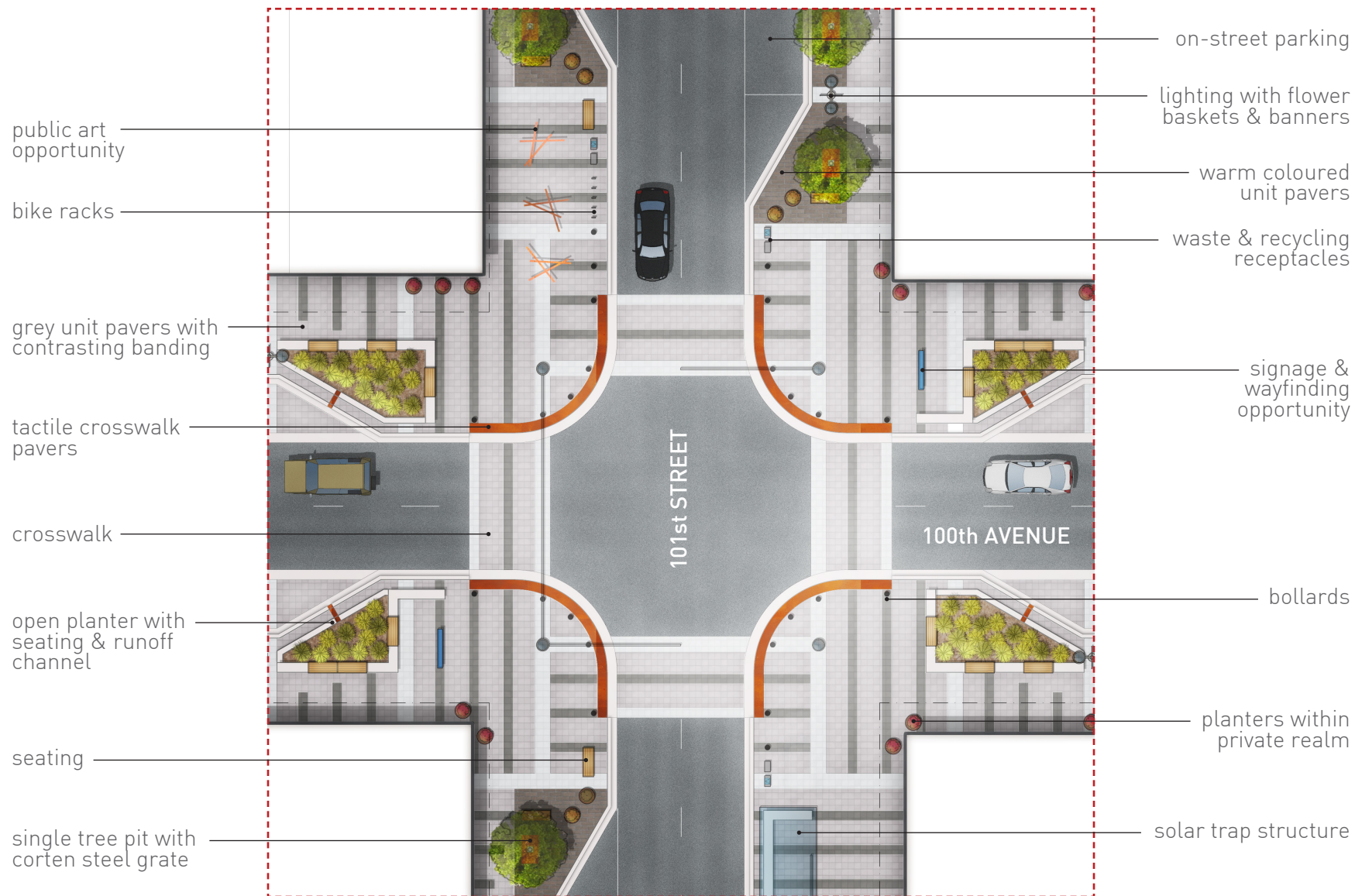


Figure 32: Urban Avenue (100th Avenue) Enhanced Intersection Demonstration Plan



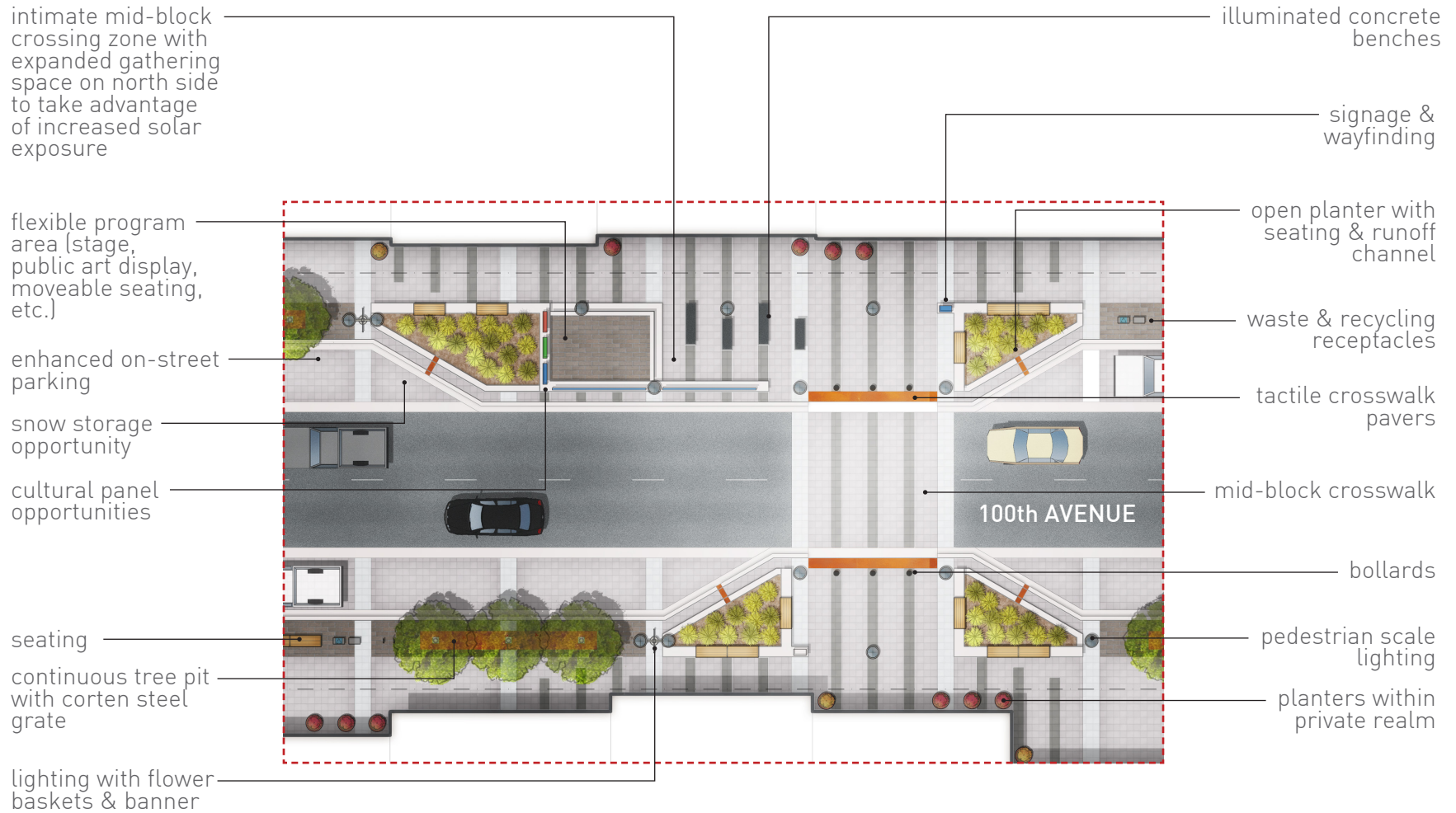


Figure 33: Urban Avenue (100th Avenue) Mid-Block Crossing Demonstration Plan





Figure 34: Urban Avenue (100th Avenue) Summer Streetscape Experience



Figure 35: Urban Avenue (100th Avenue) Winter Mid-Block Crossing Experience

## 101st Avenue Concept Demonstration

Having the farmers' market and Montrose site situated along 101st Avenue make it an ideal street to be converted into a shared cultural space. The use of a shared street scheme can create a unique and distinctive streetscape in the downtown and potentially encourage development opportunities along the corridor.

The demonstration concept plan (Figure 36) utilizes a curbless street configuration with a uniform unit paving pattern that spans the entire streetscape. This helps to blur the lines between sidewalk and roadway, thus establishing an environment more conducive to pedestrian activity. Tree planting clusters on continuous tree grates and bollards provide

subtle separation between pedestrians and vehicles. These site furnishings and landscape features also help to enhance exclusive areas for pedestrians along the building face.

The use of continuous trench drains assists in collecting stormwater runoff and helps define the traveled vehicular path. The transition space between vehicles and pedestrians can serve as on-street parking or expanded pedestrian zones, depending on the event (Figure 37). The space fronting the farmers' market presents an opportunity for the continuation of pavers into the private realm, establishing a space for events and allowing indoor market activities to expand outdoors (Figures 37 & 39).



Figure 36: Shared Avenue (101st Avenue) Detailed Concept Demonstration Plan

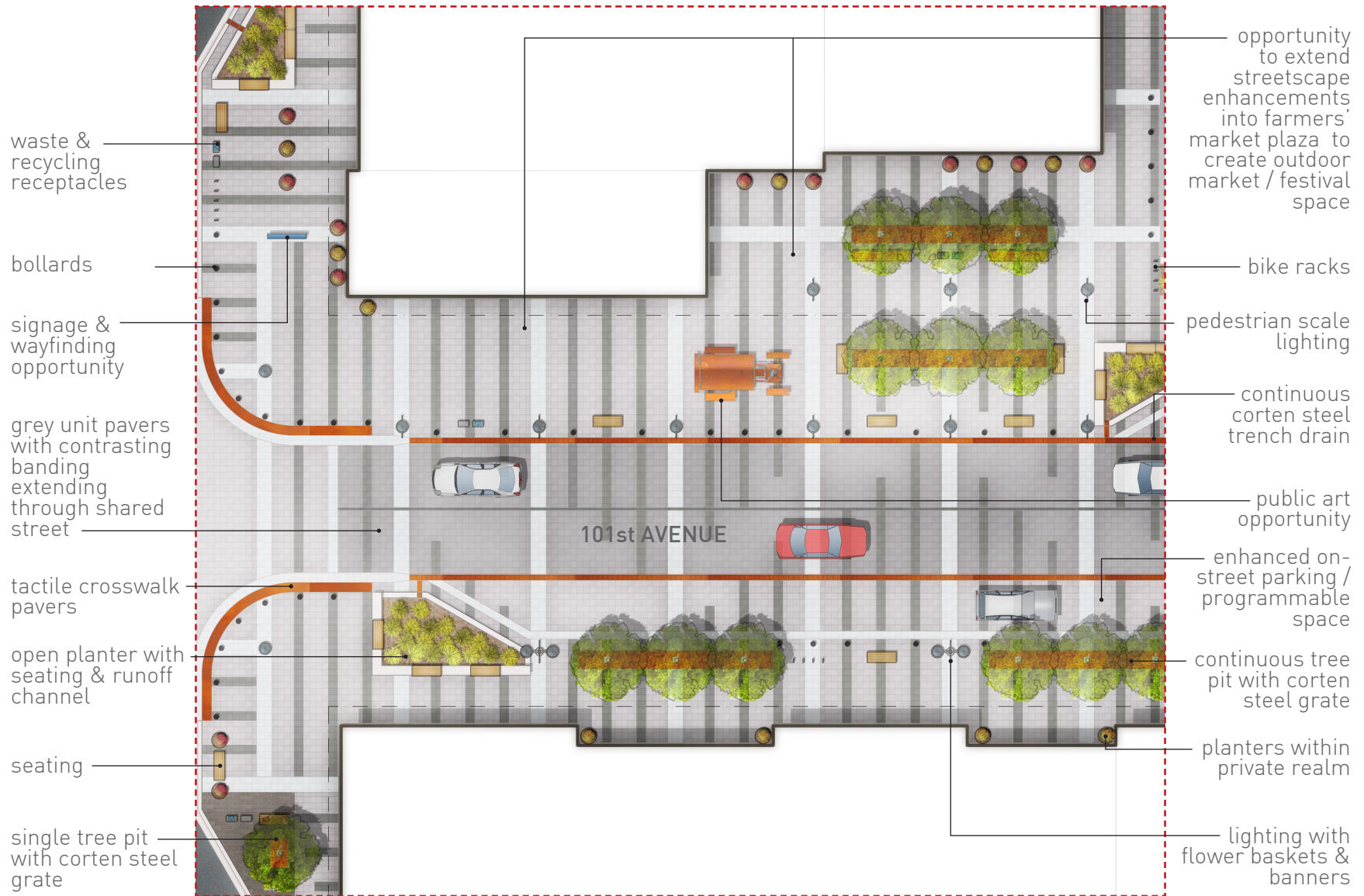


Figure 37: Shared Avenue [101st Avenue] Market Plaza Demonstration Plan

↑ 0 2 6m

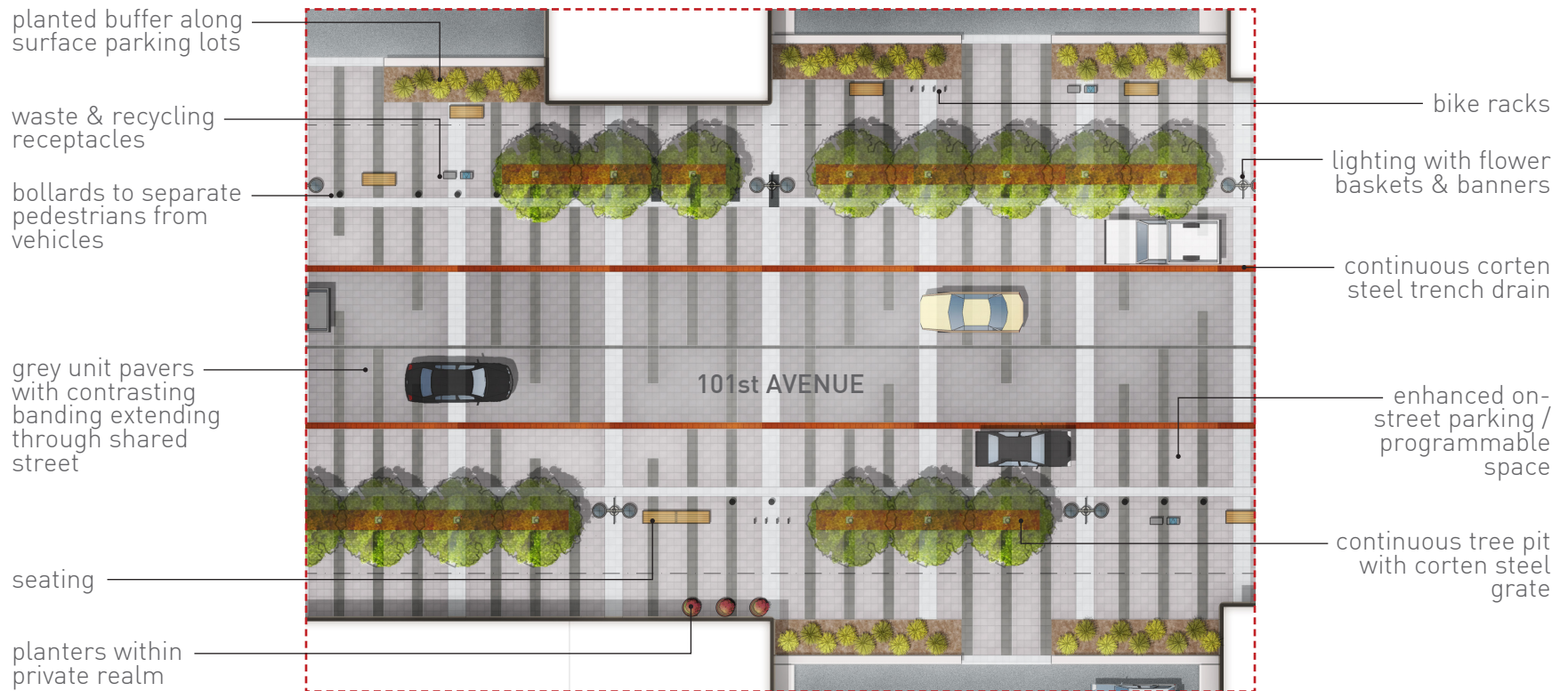


Figure 38: Shared Avenue (101st Avenue) Typical Streetscape Condition Demonstration Plan





Figure 39: Shared Avenue (101st Avenue) Summer Festival Experience

## 6.4.4 Cultural Landscape Implementation Recommendations

The development of cultural streetscape elements, from public art to lighting, seating, paving, etc., requires a detailed design process, complete with appropriate stakeholder consultation. The cultural elements that make up the proposed kit of parts are representations of Grande Prairie's past, present, and future, and can evolve over time - the streetscape simply provides the setting for this to take place.

The process of development begins with conceptual design, as proposed in this report, and progresses into detailed design and construction (Figure 40) with the support of Council and Administration. The following broad recommendations are proposed to lead the city and local stakeholders into the detailed design process:

- Apply a material palette of stainless steel, corten steel, high density paper composite (wood texture), concrete, and polycarbonate panels to modernize the downtown, while at the same time reflecting Grande Prairie's heritage.
- Adopt a unified kit of parts comprising lighting, street furniture, planting, paving, and transitional components to be applied to designated zones within the downtown.
- Support the detailed design of the kit of parts features, as well as various upgrade opportunities, such as gateway features, intersection upgrades, and mid-block crossings / enhanced gathering spaces.

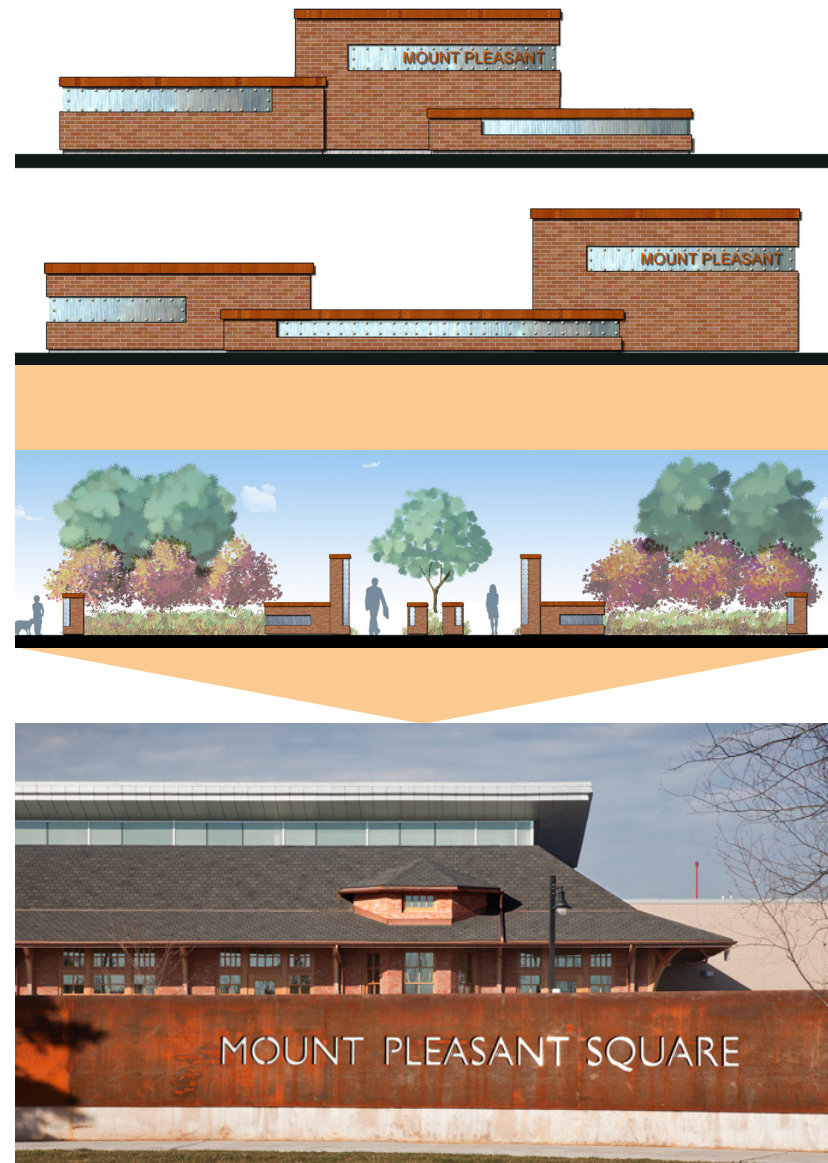


Figure 40: Example of Design Development Process

## 6.5 Winter City Recommendations

### 6.5.1 Year-round Activity

Grande Prairie's downtown must be able to function as an all-season environment. While the downtown currently supports various outdoor events throughout the summer, such as sidewalk sales, parades, and the Street Performers' Festival, the outdoor space is much less active during the winter months. The proposed streetscape enhancements help to promote a downtown that is active year-round, from new infrastructure for seasonal decorations and lighting, to heat trap structures and expanded public gathering spaces.

#### *Recommendations:*

- Encourage the activation of 100th Avenue mid-block bump-outs and other gathering spaces for winter activities, such as snow playgrounds, ice sculptures, festivals, parades, etc.
- Investigate opportunity areas for the construction of a downtown skating rink.
- Consider ways to use existing downtown parks for winter activities, such as tubing, snow slides, sledding hills, ski trails, skating rinks, etc.
- Inspire local pride in the community by rejecting negative thinking about winter, and instead promoting its potential.
- Communicate with other winter cities to learn about downtown activities that are successful.

### 6.5.2 Snow & Ice Removal

The downtown streetscape enhancement process presents a significant opportunity to consider snow removal in the design of road improvements. While some of the proposed streetscape elements, such as intersection and mid-block bump-outs, pose potential obstacles for snowplows, the benefits to the streetscape outweigh this inconvenience. The downtown should be able to benefit from great streets, while at the same time dealing with the realities of winter conditions by establishing a comprehensive snow removal strategy.

#### *Recommendations:*

- Design road cross sections to provide an area for snow storage adjacent to the road (e.g., boulevards).
- Designate certain on-street parking spaces for snow storage where the road ROW is too narrow to allow for snow storage on the boulevard.
- Restrict on-street parking during snow events.
- Consider using bike lanes as additional snow storage areas if winter bike commuting is not prevalent.
- Minimize damage from snow clearing equipment by placing vertical elements on bump-outs to provide visual cues to plow operators.
- Consider utilizing ATV mounted snow ploughs or other small snow removal vehicles for bike lanes and sidewalks.

- Implement a priority system for snow removal on downtown streets.
- Implement a proactive anti-icing approach by applying de-icing material to downtown streets approximately two hours before the snow event.
- Site downtown snow storage areas where they will receive sufficient solar radiation to speed melt-off.
- Store snow in a number of smaller downtown sites, rather than one large area in order to speed melt-off.
- Continually investigate the use of new equipment or innovative technology for snow removal.
- Continually explore innovative alternative de-icing treatments

### 6.5.3 Pedestrian Circulation

Downtown pedestrian circulation in both the public and private realm is an imperative consideration, especially during cold or snowy conditions. Pedestrians must be able to conveniently and safely navigate downtown streetscapes, parking lots, and building entryways.

#### *Recommendations:*

- Ensure sidewalks and parking lots are quickly cleared of snow and ice.
- Design pedestrian surfaces with materials that will withstand freeze-thaw cycles.
- Cover ramps or stairs to protect them from snow and ice.
- Provide handrails for all public and private walkways that exist on slopes.

- Consider installing snowmelt systems for high-traffic walkways and sloped areas.
- Establish transition areas at building entrances to shed snow prior to entering.
- Provide shelters or wind blocks in areas that serve as outdoor gathering spaces.

### 6.5.4 Vegetation

Due to Grande Prairie's northern climate, it is common for low winter temperatures or early frost to result in severe winterkill. In order to create a streetscape full of healthy plants, a variety of species should be considered that are hardy to zone 2b. Vegetation can also offer climate control by establishing desirable microclimate conditions if planted appropriately.

#### *Recommendations:*

- Establish a planting list of appropriate species, hardy to zone 2b, for the downtown Grande Prairie streetscape.
- Select species that offer attractive or useful winter characteristics, such as twig color, fruit, or climate control.
- Plant deciduous trees on southern building faces to provide cooling in the summer, while still allowing sunlight to filter in during the winter.
- Plant coniferous vegetation on north and west sides of outdoor areas to offer protection from prevailing winter winds.
- Use berms and vegetation to direct snow drifts away from building entrances.

### 6.5.5 Materials

Investigations show that the existing downtown sidewalk pavers have become uneven due to substructure heaving and settling, creating areas of ponding water and ice that cause tripping hazards. This is a result of improper material selection and installation in the context of the Grande Prairie climate. The streetscape enhancement process presents the opportunity to now utilize appropriate materials and construction methods.

#### *Recommendations:*

- Use technology and materials that can appropriately withstand winter weather conditions.
- Treat pavers before installation (e.g., NANO based sealant) for ease of maintenance.
- Source local materials for ease of future replacement.
- Allocate an appropriate operational budget to cover use and maintenance.
- Incorporate colour and lighting treatments into the streetscape design to offset the darkness and monotony of the winter season.

### 6.5.6 Future Development

As downtown redevelopment occurs in the future, it will be important to encourage thoughtful site design that responds to winter conditions. Building orientation, building design, and density are all critical considerations when it comes to creating comfortable winter spaces.

#### *Recommendations:*

- Consider establishing policies that ensure future building orientation, design, and density mitigate harsh winter conditions:
  - Building orientation should maximize solar exposure, protect outdoor spaces from long shadows or prevailing winds, and minimize wind tunneling effects.
  - Building surfaces should help reduce wind speed.
  - Roofs should account for snow and ice accumulation.
  - A dense, compact, downtown development pattern should be promoted.

## 7.0 CAPITAL COSTING ESTIMATES

The preparation of cost analysis is used to assist Council and Administration in setting capital budgets for the overall design program. Assumptions and limitations of the costing include the following:

1. Costs are based on 2014 actual construction costs for the region, with minimal allowance for inflation.
2. Value engineering and materials management for sub base recycling is assumed during detailed design.
3. Costs for oversized (900mm) sanitary trunk in 101st Street are assumed to be covered by Aquatera.
4. All work complies to the City of Grande Prairie standards for road construction.
5. Streetscape enhancements are subject to detailed design.

Exclusions in the cost analysis are listed as follows:

1. Inflationary considerations;
2. Traffic signal upgrades and enhancements; and
3. Major entry feature at the east of the study area.

The overall budget for the project is approximately \$131,500,000, including approximately \$100,000,000 in capital costs, and the remainder in fees for design, testing, and contingency (refer to Tables 5-7). In the 2015 budget, Council has approved \$20,000,000 for the next four years to complete four phases of the work.

Costs are broken into four distinct categories, including demolition, roadway, utilities, and streetscape elements, each described as follows:

### *Demolition*

Demolition includes removal and disposal of all materials, including stockpile for reuse, as applicable.

### *Roadway*

Roadway work includes curb and gutter, treadway, and concrete walkway. Signage and stripping are also included in this category. Significant enhancements to paving are excluded, and any specific enhancements will need to be accommodated in the 'Streetscape Elements' category.

### *Utilities*

Deep utilities include replacement of sanitary, storm, and water utilities, including allowances for services to be replaced up to the property line. It is generally the replacement of like with like, with considerations made for one or two pipe size increases. Deep utility works have large proportions of their total cost allocated to excavations, gravel, and roadworks. Shallow utility allowances have been made in this category to permit necessary crossings, replacement of streetlight cables, and other city owned utilities. Shallow franchise utility companies will need to be consulted early in the detailed design process.

### *Streetscape Elements*

Streetscape elements include lighting, street furniture, planting, and special features. When determining streetscape elements, representative sections have been used as the basis of costing, and these metrics applied to other locations. Unlike critical infrastructure, final determination of detailed design for streetscape elements should be derived from the established budgets.

Table 5: Summary Cost by Facility & Roadway Section | East-West Avenues

DEMOLITION			97 Avenue	99 Avenue	100 Avenue	101 Avenue	102 Avenue	103 Avenue	104 Avenue
	Demolition and Removal	\$4,805,350	\$833,250	\$1,128,050	\$953,150	\$990,000	\$405,900	\$160,875	\$334,125
ROADWAY									
	Curb and Gutter	\$887,200	\$161,600	\$212,800	\$191,200	\$160,000	\$65,600	\$31,200	\$64,800
	Treadway	\$7,893,600	\$1,444,300	\$1,780,900	\$1,662,100	\$1,430,000	\$586,300	\$321,750	\$668,250
	Walkway	\$15,299,700	\$545,400	\$5,320,000	\$4,780,000	\$4,000,000	\$295,200	\$140,400	\$218,700
	Shallow Utilities	\$277,250	\$50,500	\$66,500	\$59,750	\$50,000	\$20,500	\$9,750	\$20,250
DEEP UTILITIES									
	Sanitary	\$3,113,250	\$535,300	\$771,400	\$693,100	\$560,000	\$229,600	\$109,200	\$214,650
	Storm	\$2,572,900	\$444,400	\$638,400	\$573,600	\$460,000	\$188,600	\$89,700	\$178,200
	Water	\$3,887,300	\$555,500	\$1,037,400	\$932,100	\$710,000	\$291,100	\$138,450	\$222,750
STREETSCAPE ELEMENTS									
	Planting	\$3,472,000	\$494,900	\$931,000	\$836,500	\$630,000	\$258,300	\$122,850	\$198,450
	Furniture	\$905,400	\$-	\$310,800	\$334,600	\$260,000	\$-	\$-	\$-
	Lights	\$14,538,150	\$2,727,000	\$3,591,000	\$3,226,500	\$2,430,000	\$996,300	\$473,850	\$1,093,500
	Special Features	\$2,826,000	\$-	\$931,000	\$1,195,000	\$700,000	\$-	\$-	\$-
		\$60,478,100	\$6,958,900	\$15,591,200	\$14,484,450	\$11,390,000	\$2,931,500	\$1,437,150	\$2,879,550

Table 6: Summary Cost by Facility & Roadway Section | North-South Streets

DEMOLITION			97 Street	Resources Road	98 Street	99 Street	100 Street	101 Street	102 Street
	Demolition and Removal	\$3,786,750	\$321,750	\$571,450	\$313,500	\$572,000	\$847,000	\$424,875	\$736,175
ROADWAY									
	Curb and Gutter	\$639,200	\$62,400	\$90,400	\$60,800	\$108,800	\$123,200	\$82,400	\$111,200
	Treadway	\$7,792,600	\$643,500	\$1,310,250	\$565,400	\$1,192,500	\$1,146,200	\$909,750	\$2,025,000
	Walkway	\$6,790,900	\$210,600	\$406,800	\$209,000	\$1,526,300	\$2,604,400	\$1,333,400	\$500,400
	Shallow Utilities	\$199,750	\$19,500	\$28,250	\$19,000	\$34,000	\$38,500	\$25,750	\$34,750
DEEP UTILITIES									
	Sanitary	\$2,202,050	\$206,700	\$327,700	\$201,400	\$360,400	\$443,700	\$272,950	\$389,200
	Storm	\$1,822,200	\$171,600	\$271,200	\$167,200	\$299,200	\$366,700	\$226,600	\$319,700
	Water	\$2,605,350	\$214,500	\$440,700	\$209,000	\$374,000	\$590,450	\$283,250	\$493,450
STREETSCAPE ELEMENTS									
	Planting	\$2,325,050	\$191,100	\$395,500	\$186,200	\$333,200	\$528,850	\$252,350	\$437,850
	Furniture	\$214,800	\$-	\$-	\$-	\$67,000	\$86,800	\$61,000	\$-
	Lights	\$10,559,700	\$1,053,000	\$1,525,500	\$1,026,000	\$1,836,000	\$2,039,850	\$1,390,500	\$1,688,850
	Special Features	\$480,000	\$-	\$-	\$-	\$120,000	\$120,000	\$120,000	\$120,000
		\$39,418,350	\$2,772,900	\$4,796,300	\$2,644,000	\$6,251,400	\$8,088,650	\$4,957,950	\$6,120,400

Table 7: Total Costs for all Roads

Subtotal Construction:	\$99,896,450	15% fee for design and testing 15% Contingency
Estimated Consulting:	\$15,000,000	
Allowance for Contingency and Inflation:	\$17,250,000	
Estimated Total:	\$132,146,450	

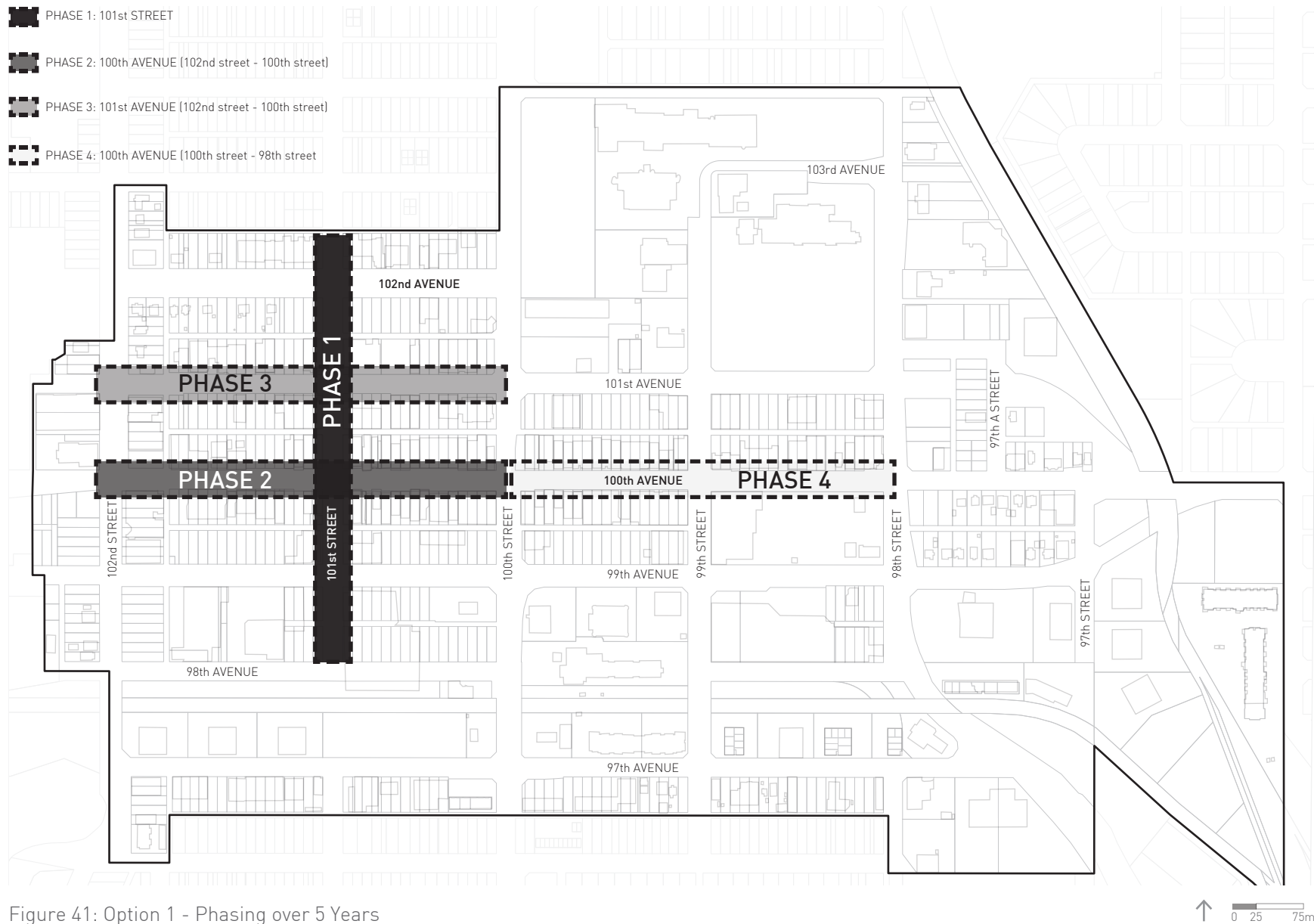


Figure 41: Option 1 - Phasing over 5 Years

## 8.0 PHASING RECOMMENDATIONS

Council has approved a \$20,000,000 downtown enhancement budget over four years, which will allow four \$5,000,000 phases of work to be completed. During the third workshop, in which streetscape enhancement recommendations were presented, Council discussed potential phasing strategies with two options arising, as follows.

### 8.1 Phasing Option 1

#### ***Phase 1: 101st Street***

Aquatera has identified the replacement of the 101st Street sanitary trunk as a key project. The streetscape upgrades of 101st Street should coincide with Aquatera's installation of the oversized sanitary trunk since demolition, roadway, and utility construction will already be taking place. This may mean that less city funds will have to be allocated to the overall cost of the 101st Street upgrades. Upgrading this street first may also offer a means of practicing communication and construction tactics prior to disrupting the more frequented roads (Figure 41).

#### ***Phase 2: 100th Avenue (102nd Street - 100th Street)***

Due to 100th Avenue, the Urban Avenue, being an established retail street in the heart of the downtown, its priority for

redevelopment is relatively high, especially in terms of enhancing the pedestrian realm. It is recommended that Phase 2 of the downtown enhancement process include the upgrade of 100th Avenue, from the 102nd Street to 100th Street. With 101st Street already redeveloped as part of Phase 1, it will be appropriate to undertake work from this point out.

#### ***Phase 3: 101st Avenue (102nd Street - 100th Street)***

Phase 3 of the downtown enhancement process is recommended on 101st Avenue, from 102nd street to 100th Street. This would include the redevelopment of the outdoor space fronting the farmers' market.

#### ***Phase 4: 100th Avenue (101st Street - 98th Street)***

Phase 4 of the downtown enhancement process is an optional phase, as funding may need to be reallocated or other alternatives may need to be explored in order to help spur the intensification of key downtown areas. Should Phase 4 continue in the form of street upgrades, it is recommended on 100th Avenue, from 100th Street to 98th Street, to complete all 100th Avenue enhancements within the first four years.

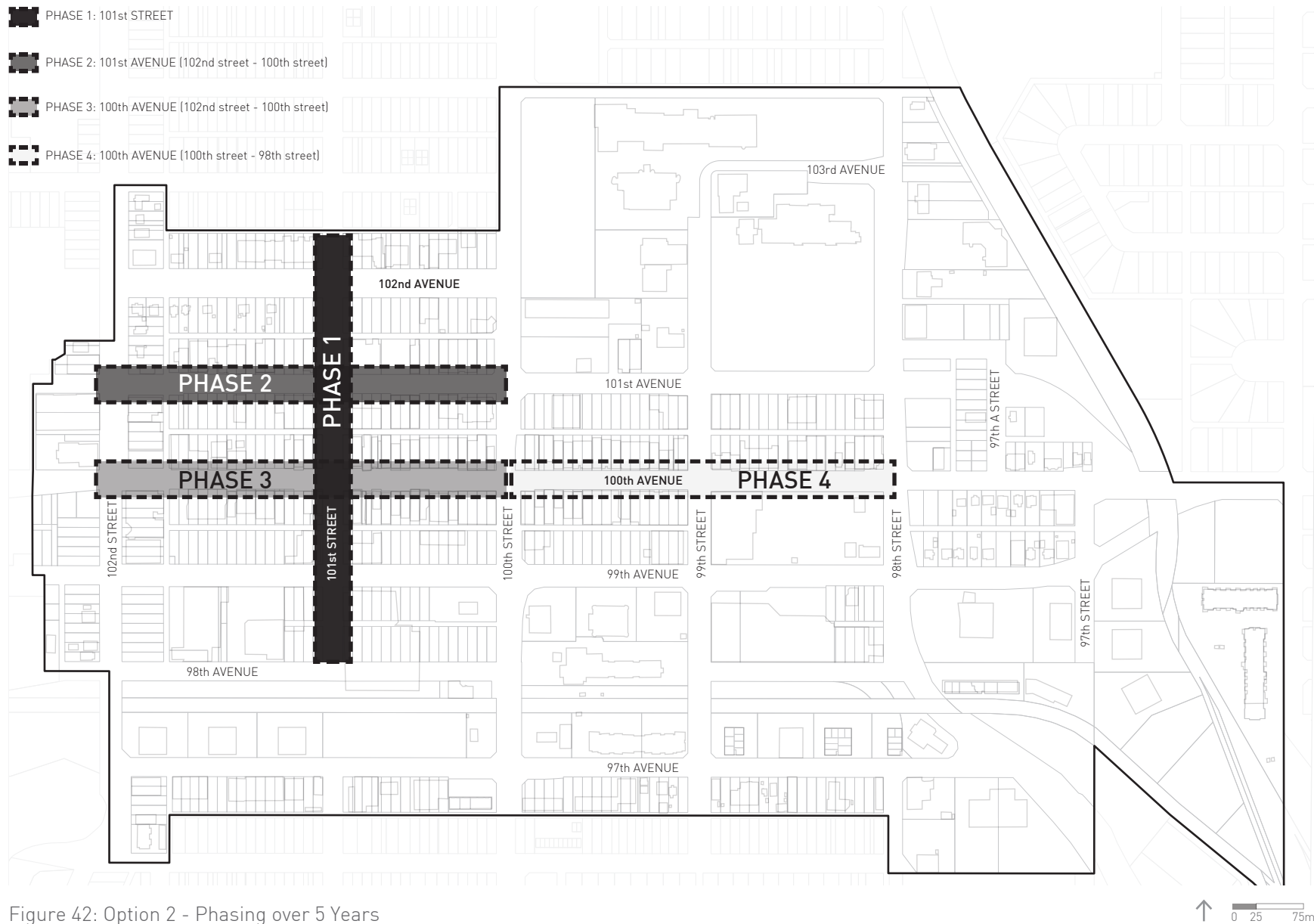


Figure 42: Option 2 - Phasing over 5 Years

## 8.2 Phasing Option 2

### ***Phase 1: 101st Street***

Aquatera has identified the replacement of the 101st Street sanitary trunk as a key project. The streetscape upgrades of 101st Street should coincide with Aquatera's installation of the oversized sanitary trunk since demolition, roadway, and utility construction will already be taking place. This may mean that less city funds will have to be allocated to the overall cost of the 101st Street upgrades. Upgrading this street first may also offer a means of practicing communication and construction tactics prior to disrupting the more frequented roads (Figure 42).

### ***Phase 2: 101st Avenue (102nd Street - 100th Street)***

Due to the popularity of 101st Avenue as a shared festival street, it is recommended that Phase 2 of the downtown enhancement process include the upgrade of 101st Avenue, from the 102nd Street to 100th Street. This will also allow the opportunity to show the benefits of the design on a road with fewer businesses and less traffic.

### ***Phase 3: 100th Avenue (102nd Street - 100th Street)***

100th Avenue, from the 102nd Street to 100th Street, is recommended as Phase 3 of the downtown enhancement process. With 101st Street already redeveloped as part of Phase 1, it will be appropriate to undertake work along 100th Avenue from this point out.

### ***Phase 4: 100th Avenue (101st Street - 99th Street)***

Phase 4 of the downtown enhancement process is an optional phase, as funding may need to be reallocated or other alternatives may need to be explored in order to help spur the intensification of key downtown areas. Should Phase 4 continue in the form of street upgrades, it is recommended on 100th Avenue, from 100th Street to 98th Street, to complete all 100th Avenue enhancements within the first four years.

Once the four phases are complete, the construction process and resulting environments can be evaluated to help inform the execution of the remaining phases, moving forward.



## 9.0 COUNCIL DECISION

On April 20, 2015, the Downtown Infrastructure Assessment, Streetscape Enhancement, and Rehabilitation Project Final Recommendation Report was approved by Council with the direction to proceed with **Phasing Option 2** (Shared Festival Street) on 101st Avenue.

The project will commence Phase 1 to coincide with Aquatera's planned replacement of the 101st Street sanitary trunk. Phase 2 will include the construction of a portion of the Shared Festival Street on 101st Avenue, from 102nd Street to 100th Street. Phase 3 will include enhancements on 100th Avenue, from 102nd Street to 100th Street, and Phase 4 will include either the continuation of the 100th Avenue enhancements or the reallocation of funds to spur the intensification of key downtown areas.

In response to the "Revisiting the Couplet" discussion and alternative scenario comparison, Council confirmed that the 101st Avenue couplet will not be constructed.



# APPENDICES

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- APPENDIX A. Subsurface Utility Assessment Figures
- APPENDIX B. Surface Infrastructure Assessment Figures
- APPENDIX C. The Couplet and the Future of Downtown Grande Prairie
- APPENDIX D. Visioning Workshop #1 Results
- APPENDIX E. Visioning Workshop #2 Results
- APPENDIX F. Public Engagement “What We Heard” Report
- APPENDIX G. Proposed Street Hierarchy ROW Drawings



# APPENDIX A

## Subsurface Utility Assessment Figures



FIGURE 2 OVERALL PLAN





FIGURE 4 ZONE G-1 FIRE

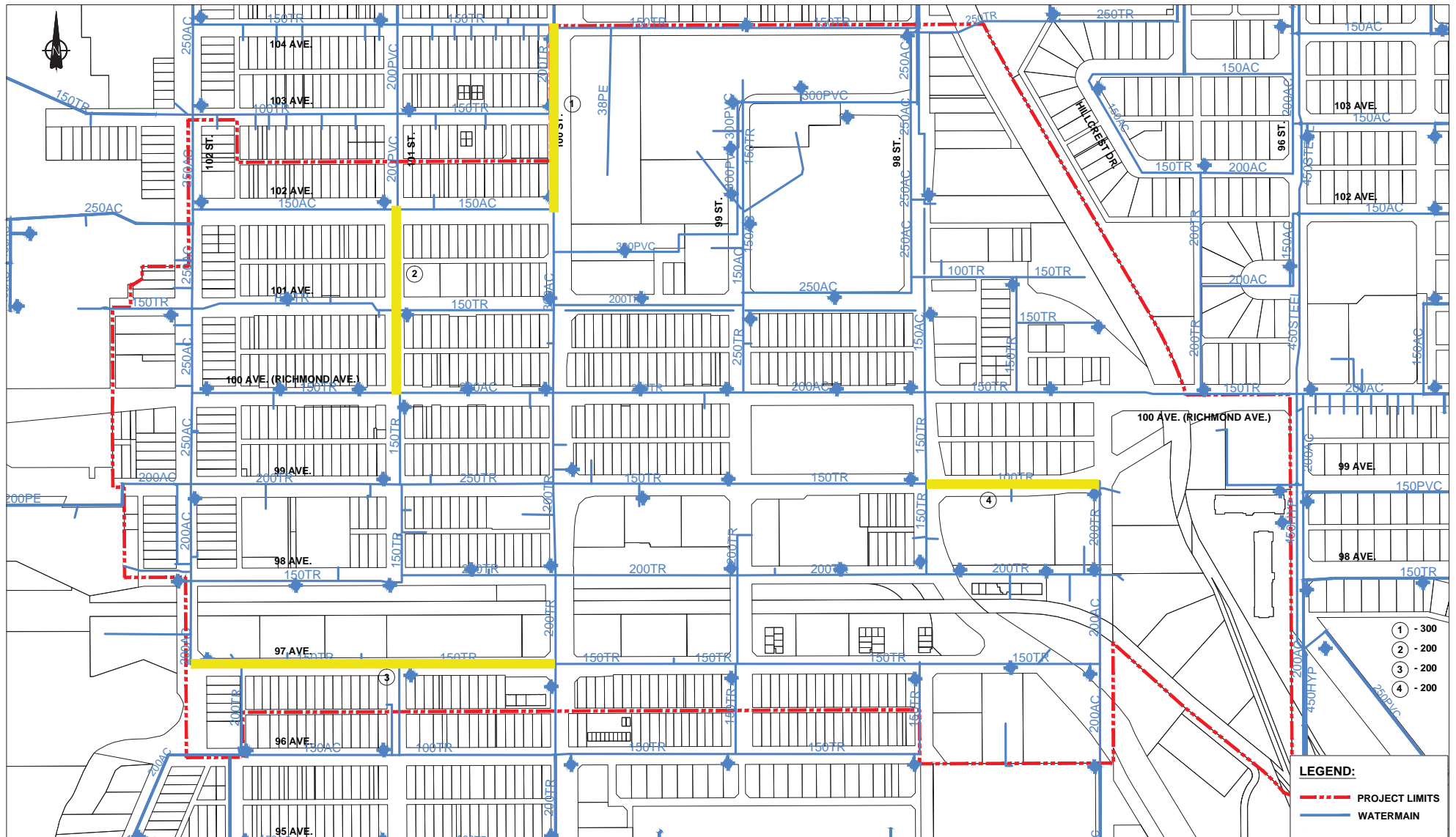


FIGURE 5 WATER NETWORK



FIGURE 6 SANITARY SEWER NETWORK

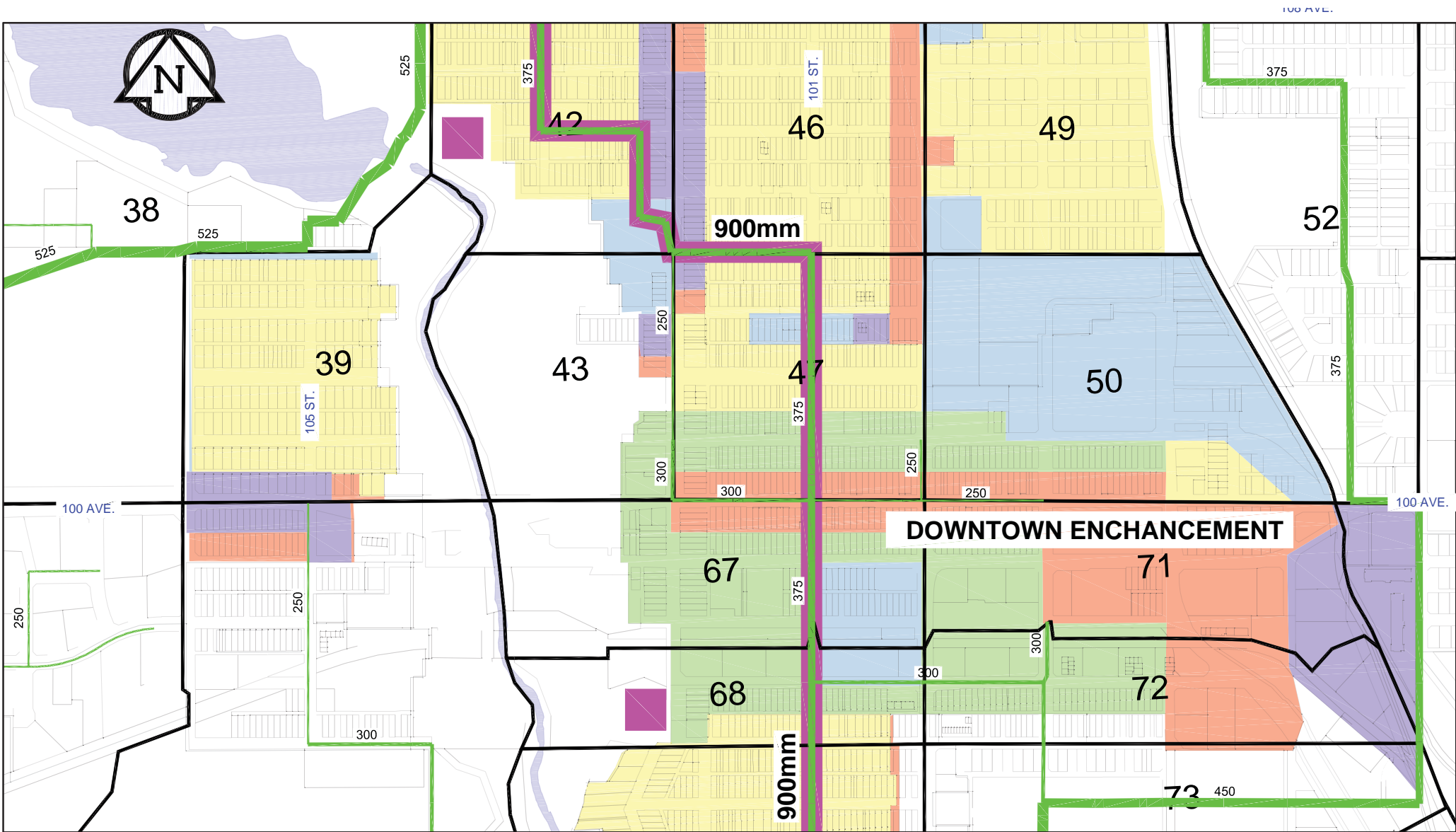


FIGURE 7 SANITARY SEWER UPGRADES



# APPENDIX B

## Surface Infrastructure Assessment Figures

**Table 1, Surface Infrastructure Condition Assessment Summary**

Road	Description	Visual Road Condition	Sidewalk Condition	Curb and Gutter	Remarks
97 Avenue	98 Street to 102 Street	<ul style="list-style-type: none"> <li>• Very Good (6)</li> <li>• Recent Full Depth Reclamation</li> <li>• Few small potholes, localized failures noted</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly pavers</li> <li>• Fair to Good (4)</li> <li>• Some settlements creating trip hazards noted</li> <li>• Section of ACP trail noted west of 100 Street on north side</li> <li>• Few areas concrete appear to be development related</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Some sections chipped, with pieces missing noted.</li> <li>• Sections replaced with recent work.</li> </ul>	<ul style="list-style-type: none"> <li>• 2 wide lanes with on-street parking</li> <li>• Several para-ramps (6-8) noted to be out-dated/not correct</li> </ul>
98 Avenue	100 Street to 102 Street	<ul style="list-style-type: none"> <li>• Very Good (6)</li> </ul>	<ul style="list-style-type: none"> <li>• Pavers</li> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 driving lanes</li> <li>• Parking lot</li> </ul>
99 Avenue	96 Street to 98 Street	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Transverse cracking</li> </ul>	<ul style="list-style-type: none"> <li>• Pavers</li> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Short section noted to be repaired with asphalt</li> </ul>	<ul style="list-style-type: none"> <li>• 3 driving lanes with parking</li> <li>• 97 Street to 96 Street 2 lanes - no parking</li> </ul>
	98 Street to 102 Street	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Transverse cracking</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly pavers</li> <li>• Appears to be 2.5 metres in width</li> <li>• Some concrete</li> <li>• Some para-ramp concerns</li> <li>• Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>• Fair (3)</li> <li>• Long sections of curb appear to be damaged by snow clearing operations – missing</li> </ul>	<ul style="list-style-type: none"> <li>• 3 driving lanes with parking (mostly on one side and turning bays)</li> </ul>
100 Avenue (Richmond Avenue)	96 Street to 98 Street	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Transverse cracks and patches</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly pavers</li> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 driving lanes</li> <li>• Parking both sides</li> </ul>

**Table 1, Surface Infrastructure Condition Assessment Summary**

Road	Description	Visual Road Condition	Sidewalk Condition	Curb and Gutter	Remarks
100 Avenue (Richmond Avenue)  (continued)	98 Street to 102 Street	<ul style="list-style-type: none"> <li>• <b>Fair (3)</b></li> <li>• Transverse and longitudinal cracks</li> <li>• Some areas of subgrade failures and rutting noted</li> <li>• Patches due to utility installations</li> <li>• Better between 101 Street and 102 Street</li> </ul>	<ul style="list-style-type: none"> <li>• Pavers</li> <li>• Fair to Good (4)</li> <li>• Wide sidewalks appear to be 5 metres in width</li> <li>• Settlements and trip hazards</li> <li>• Some pavers of different colour</li> <li>• Signal vaults in para-ramps (not ideal)</li> <li>• Tree grates with missing trees</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Poor to Fair (2)</b></li> <li>• Extensive areas appear to be damaged or missing by snow clearing operations</li> </ul>	<ul style="list-style-type: none"> <li>• 2 driving lanes</li> <li>• Parking both sides</li> <li>• Mid-block crossing locations with curb extensions created by islands – some drainage concerns may exist but not observed</li> <li>• Sidewalk extension/detour noted for restaurant patio – need to review road safety</li> </ul>
101 Avenue	99 Street to 102 Street	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Long sections of longitudinal patch alongside parking lane/driving lane</li> <li>• Transverse and longitudinal cracks</li> <li>• Spray patch in areas</li> </ul>	<ul style="list-style-type: none"> <li>• Pavers</li> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>• Two driving lanes</li> <li>• Parking both sides</li> </ul>
102 Avenue	100 Street to 102 Street	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete, appear to be 1 m wide</li> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>• Two driving lanes</li> <li>• Parking both sides</li> </ul>
98 Street (Resources Road)	96 Avenue to 100 Avenue	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Cracks</li> <li>• Rutting noted at 99 Ave</li> <li>• Thermoplastic pavement markings worn at railway crossing</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Pavers</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Some areas damaged, chipped</li> </ul>	<ul style="list-style-type: none"> <li>• Truck Route</li> <li>• 4 lanes with turning lanes, some sections divided with raised median</li> </ul>

**Table 1, Surface Infrastructure Condition Assessment Summary**

<b>Road</b>	<b>Description</b>	<b>Visual Road Condition</b>	<b>Sidewalk Condition</b>	<b>Curb and Gutter</b>	<b>Remarks</b>
98 Street (Resources Road)	100 Avenue to 104 Avenue	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Some areas of rutting</li> <li>Transverse and longitudinal cracks</li> </ul>	<ul style="list-style-type: none"> <li>Good (5)</li> <li>Pavers 100 Ave to 101 Ave</li> <li>Concrete 101 Ave to 104 Ave</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Some areas damaged, chipped</li> </ul>	<ul style="list-style-type: none"> <li>Truck Route</li> <li>4 lanes with turning lanes, some sections divided with raised median</li> </ul>
99 Street	97 Avenue to 99 Avenue	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Some cracks noted</li> </ul>	<ul style="list-style-type: none"> <li>Good (5)</li> <li>Pavers</li> </ul>	<ul style="list-style-type: none"> <li><b>Fair (3)</b></li> <li><b>Damaged areas noted</b></li> </ul>	<ul style="list-style-type: none"> <li>Transit Route</li> <li>2 driving lanes with parking</li> <li>Bus transfer/interch at 98 Ave.</li> </ul>
	99 Avenue to 100 Avenue	<ul style="list-style-type: none"> <li>Good (5)</li> <li>Some cracking</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Pavers and concrete</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>2 driving lanes with parking</li> </ul>
	100 Avenue to Montrose College/Provincial Bldg.	<ul style="list-style-type: none"> <li><b>Fair (3)</b></li> <li><b>More extensive cracking</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Fair (3)</b></li> <li><b>Concrete and ACP</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Poor to Fair (2)</b></li> <li><b>Areas missing</b></li> </ul>	<ul style="list-style-type: none"> <li>2 driving lanes with parking</li> </ul>
100 Street (Clairmont Road)	97 Avenue to 100 Avenue	<ul style="list-style-type: none"> <li>Good (5)</li> <li>Cracks and rutting</li> </ul>	<ul style="list-style-type: none"> <li>Good (5)</li> <li>Pavers</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>4 driving lanes</li> </ul>
	100 Avenue to 104 Avenue	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Some failures noted</li> <li>Some patches</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Pavers</li> <li>Concrete and ACP from 102 Ave</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>4 driving lanes</li> </ul>
101 Street	98 Avenue to 100 Avenue	<ul style="list-style-type: none"> <li>Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Pavers</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>2 driving lanes with parking</li> </ul>
	100 Avenue to 102 Avenue	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Some patches</li> </ul>	<ul style="list-style-type: none"> <li>Fair to Good (4)</li> <li>Pavers</li> </ul>	<ul style="list-style-type: none"> <li>Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>2 driving lanes with parking</li> </ul>

**Table 1, Surface Infrastructure Condition Assessment Summary**

<b>Road</b>	<b>Description</b>	<b>Visual Road Condition</b>	<b>Sidewalk Condition</b>	<b>Curb and Gutter</b>	<b>Remarks</b>
102 Street	96 Avenue to 99 Avenue	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Pavers</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 lanes with parking</li> </ul>
	99 Avenue to 100 Avenue	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Pavers</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> </ul>	<ul style="list-style-type: none"> <li>• 4 lanes with parking</li> </ul>
	100 Avenue to 103 Avenue	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> <li>• Concrete – narrow only 1m wide</li> </ul>	<ul style="list-style-type: none"> <li>• Good (5)</li> </ul>	<ul style="list-style-type: none"> <li>• 4 lanes with parking</li> <li>• Red surface treatment at 102 St and 102 Ave entrance to park</li> </ul>
103 Street	98 Avenue to 99 Avenue	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Some cracks</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Pavers</li> </ul>	<ul style="list-style-type: none"> <li>• Fair to Good (4)</li> <li>• Some areas damaged, chipped</li> </ul>	<ul style="list-style-type: none"> <li>• Access to Montrose College, Provincial Building and parking lot</li> </ul>

Table 2, Surface Infrastructure Replacement Costs

Road	Description	Roads					Sidewalk					Curb and Gutter			Total Estimated Cost
		Visual Condition Rating	Length (m)	Width (m)	Area (m <sup>2</sup> )	Estimated Road Cost \$ 140.00	Visual Condition Rating	Length (m)	Width (m)	Area (m <sup>2</sup> )	Estimated Sidewalk Cost \$ 300.00	Visual Condition Rating	Length (m)	Estimated Curb and Gutter Cost \$ 160.00	
97 Avenue	98 Street to 99 Street	6	311	15	4,665	\$ 653,100	4	622	2.5	1,555	\$ 466,500	4	622	\$ 99,520	\$ 1,219,120
97 Avenue	99 Street to 100 Street	6	204	15	3,060	\$ 428,400	4	408	2.5	1,020	\$ 306,000	4	408	\$ 65,280	\$ 799,680
97 Avenue	100 Street to 101 Street	6	182	15	2,730	\$ 382,200	4	364	2.5	910	\$ 273,000	4	364	\$ 58,240	\$ 713,440
97 Avenue	101 Street to 102 Street	6	227	15	3,405	\$ 476,700	5	454	2.5	1,135	\$ 340,500	5	454	\$ 72,640	\$ 889,840
98 Avenue	101 Street to 102 Street	6	231	9	2,079	\$ 291,060	5	231	5.0	1,155	\$ 346,500	5	231	\$ 36,960	\$ 674,520
99 Avenue	96 Street to 97 Street	5	233	8	1,864	\$ 260,960	5	466	2.0	932	\$ 279,600	5	466	\$ 74,560	\$ 615,120
99 Avenue	97 Street to 98 Street	5	202	15	3,030	\$ 424,200	5	404	2.0	808	\$ 242,400	5	404	\$ 64,640	\$ 731,240
99 Avenue	98 Street to 99 Street	5	208	15	3,120	\$ 436,800	4	416	2.5	1,040	\$ 312,000	3	416	\$ 66,560	\$ 815,360
99 Avenue	99 Street to 100 Street	5	202	18	3,636	\$ 509,040	4	404	2.5	1,010	\$ 303,000	3	404	\$ 64,640	\$ 876,680
99 Avenue	100 Street to 101 Street	5	184	18	3,312	\$ 463,680	4	368	2.5	920	\$ 276,000	3	368	\$ 58,880	\$ 798,560
99 Avenue	101 Street to 102 Street	5	234	18	4,212	\$ 589,680	4	468	2.5	1,170	\$ 351,000	3	468	\$ 74,880	\$ 1,015,560
100 Avenue (Richmond Avenue)	96 Street to 97 Street	4	215	8	1,720	\$ 240,800	5	215	2.0	430	\$ 129,000	5	430	\$ 68,800	\$ 438,600
100 Avenue (Richmond Avenue)	97 Street to 98 Street	4	200	15	3,000	\$ 420,000	5	400	2.0	800	\$ 240,000	5	400	\$ 64,000	\$ 724,000
100 Avenue (Richmond Avenue)	98 Street to 99 Street	3	204	15	3,060	\$ 428,400	4	408	5.0	2,040	\$ 612,000	2	408	\$ 65,280	\$ 1,105,680
100 Avenue (Richmond Avenue)	99 Street to 100 Street	3	200	15	3,000	\$ 420,000	4	400	5.0	2,000	\$ 600,000	2	400	\$ 64,000	\$ 1,084,000
100 Avenue (Richmond Avenue)	100 Street to 101 Street	3	186	15	2,790	\$ 390,600	4	372	5.0	1,860	\$ 558,000	2	372	\$ 59,520	\$ 1,008,120
100 Avenue (Richmond Avenue)	101 Street to 102 Street	3	235	15	3,525	\$ 493,500	4	470	5.0	2,350	\$ 705,000	2	470	\$ 75,200	\$ 1,273,700
101 Avenue	98 Street to 99 Street	4	200	18	3,600	\$ 504,000	5	200	2.5	500	\$ 150,000	4	400	\$ 64,000	\$ 718,000
101 Avenue	99 Street to 100 Street	4	201	18	3,618	\$ 506,520	5	402	2.5	1,005	\$ 301,500	4	402	\$ 64,320	\$ 872,340
101 Avenue	100 Street to 101 Street	4	186	18	3,348	\$ 468,720	5	372	2.5	930	\$ 279,000	4	372	\$ 59,520	\$ 807,240
101 Avenue	101 Street to 102 Street	4	230	18	4,140	\$ 579,600	5	460	3.0	1,380	\$ 414,000	4	460	\$ 73,600	\$ 1,067,200
102 Avenue	100 Street to 101 Street	5	185	18	3,330	\$ 466,200	5	370	2.0	740	\$ 222,000	4	370	\$ 59,200	\$ 747,400
102 Avenue	101 Street to 102 Street	5	230	18	4,140	\$ 579,600	5	460	2.0	920	\$ 276,000	4	460	\$ 73,600	\$ 929,200
98 Street (Resources Road)	97 Avenue to 99 Avenue	5	225	16	3,600	\$ 504,000	5	225	2.5	563	\$ 168,750	4	450	\$ 72,000	\$ 744,750
98 Street (Resources Road)	99 Avenue to 100 Avenue	5	102	22	2,244	\$ 314,160	5	204	1.5	306	\$ 91,800	4	204	\$ 32,640	\$ 438,600
98 Street (Resources Road)	100 Avenue to 101 Avenue	4	102	18	1,836	\$ 257,040	5	204	2.5	510	\$ 153,000	4	204	\$ 32,640	\$ 442,680
98 Street (Resources Road)	101 Avenue to 103 Avenue	4	230	15	3,450	\$ 483,000	5	460	1.5	690	\$ 207,000	4	460	\$ 73,600	\$ 763,600
98 Street (Resources Road)	103 Avenue to 104 Avenue	4	78	15	1,170	\$ 163,800	5	156	1.5	234	\$ 70,200	4	156	\$ 24,960	\$ 258,960
99 Street	97 Avenue to 99 Avenue	4	200	15	3,000	\$ 420,000	5	400	5.0	2,000	\$ 600,000	3	400	\$ 64,000	\$ 1,084,000
99 Street	99 Avenue to 100 Avenue	5	101	17	1,717	\$ 240,380	4	202	2.5	505	\$ 151,500	4	202	\$ 32,320	\$ 424,200
99 Street	100 Avenue to 101 Avenue	3	102	15	1,530	\$ 214,200	3	204	5.0	1,020	\$ 306,000	2	204	\$ 32,640	\$ 552,840
99 Street	101 Avenue to Montrose College/Provincial Bldg.	3	225	15	3,375	\$ 472,500	3	450	2.0	900	\$ 270,000	2	450	\$ 72,000	\$ 814,500
100 Street (Clairmont Road)	97 Avenue to 99 Avenue	5	202	20	4,040	\$ 565,600	5	404	2.5	1,010	\$ 303,000	4	404	\$ 64,640	\$ 933,240
100 Street (Clairmont Road)	99 Avenue to 100 Avenue	5	100	20	2,000	\$ 280,000	5	200	2.5	500	\$ 150,000	4	200	\$ 32,000	\$ 462,000
100 Street (Clairmont Road)	100 Avenue to 101 Avenue	4	100	20	2,000	\$ 280,000	4	200	2.5	500	\$ 150,000	4	200	\$ 32,000	\$ 462,000
100 Street (Clairmont Road)	101 Avenue to 102 Avenue	4	108	20	2,160	\$ 302,400	4	216	2.5	540	\$ 162,000	4	216	\$ 34,560	\$ 498,960
100 Street (Clairmont Road)	102 Avenue to 103 Avenue	4	105	20	2,100	\$ 294,000	4	210	2.5	525	\$ 157,500	4	210	\$ 33,600	\$ 485,100
100 Street (Clairmont Road)	103 Avenue to 104 Avenue	4	103	20	2,060	\$ 288,400	4	206	2.0	412	\$ 123,600	4	206	\$ 32,960	\$ 444,960
101 Street	98 Avenue to 99 Avenue	5	100	15	1,500	\$ 210,000	4	200	4.0	800	\$ 240,000	4	200	\$ 32,000	\$ 482,000
101 Street	99 Avenue to 100 Avenue	5	100	15	1,500	\$ 210,000	4	200	2.5	500	\$ 150,000	4	200	\$ 32,000	\$ 392,000
101 Street	100 Avenue to 101 Avenue	4	100	15	1,500	\$ 210,000	4	200	2.5	500	\$ 150,000	5	200	\$ 32,000	\$ 392,000
101 Street	101 Avenue to 102 Avenue	4	108	15	1,620	\$ 226,800	4	216	2.5	540	\$ 162,000	5	216	\$ 34,560	\$ 423,360
102 Street	96 Avenue to 98 Avenue	5	190	15	2,850	\$ 399,000	5	190	2.0	380	\$ 114,000	5	190	\$ 30,400	\$ 543,400
102 Street	98 Avenue to 99 Avenue	5	100	18	1,800	\$ 252,000	5	200	2.0	400	\$ 120,000	5	200	\$ 32,000	\$ 404,000
102 Street	99 Avenue to 100 Avenue	5	100	18	1,800	\$ 252,000	5	200	2.5	500	\$ 150,000	4	200	\$ 32,000	\$ 434,000
102 Street	100 Avenue to 101 Avenue	5	101	25	2,525	\$ 353,500	5	202	2.5	505	\$ 151,500	5	202	\$ 32,320	\$ 537,320
102 Street	101 Avenue to 102 Avenue	5	104	21	2,184	\$ 305,760	5	208	2.0	416	\$ 124,800	5	208	\$ 33,280	\$ 463,840

Rating: 1 – Poor, 2 – Poor to Fair, 3 – Fair, 4 – Fair to Good, 5 – Good, 6 – Very Good



**Table 2, Surface Infrastructure Replacement Costs**

		Roads					Sidewalk					Curb and Gutter			Total Estimated				
		Visual Condition	Length	Width	Area	Estimated Road Cost	Visual Condition	Length	Width	Area	Estimated Sidewalk Cost	Visual Condition	Length	Estimated Curb and Gutter Cost					
102 Street	102 Avenue to 103 Avenue	5	109	21	2,289	\$ 320,460	5	218	1.2	262	\$ 78,480	5	218	\$ 34,880	\$ 433,820				
103 Street	98 Avenue to 99 Avenue	4	192	8	1,536	\$ 215,040	4	384	2.0	768	\$ 230,400	4	384	\$ 61,440	\$ 506,880				
Roads:					\$ 18,447,800					Sidewalk:					\$ 12,718,530				
														C&G:		\$ 2,581,280		\$ 33,747,610	
														20% Contingency		\$ 6,749,522			
														12% Engineering		\$ 4,859,656			
														Total		\$ 45,356,788			

Notes:

1. Estimated road structure replacement cost assuming City of Grande Prairie Arterial Road Pavement Structure (Alternate 1): 125mm ACP, 300mm GBC, 350mm GSB, 300mm Subgrade Preparation (incl. wick drains)
2. Sidewalk replacement cost assuming City of Grande Prairie Typical Sidewalk Section: 120mm Concrete over 150mm Crush (20mm), 300mm Subgrade Preparation and removal of old sidewalk
3. Sidewalk replacement with Paving Stone Section: 80mm Paving Stone, 50mm Sand Leveling Course over 100mm Crush (20mm), 300mm Subgrade Preparation would cost in order of \$300/m2
4. Curb and Gutter replacement cost assuming City of Grande Prairie 190-500 Standard Barrier section and removal of old curb and gutter
5. Total Estimated Cost includes 20% Contingency to cover cost of miscellaneous items like pavement markings, concrete sidewalk ramps, signage and traffic signals (12% Engineering added for budgetting purposes)



## Table 2, Surface Infrastructure Replacement Costs

### Notes:

1. Estimated road structure replacement cost assuming City of Grande Prairie Arterial Road Pavement Structure (Alternate 1): 125mm ACP, 300mm GBC, 350mm GSB, 300mm Subgrade Preparation (incl. wick drains)
2. Sidewalk replacement cost assuming City of Grande Prairie Typical Sidewalk Section: 120mm Concrete over 150mm Crush (20mm), 300mm Subgrade Preparation and removal of old sidewalk
3. Sidewalk replacement with Paving Stone Section: 80mm Paving Stone, 50mm Sand Leveling Course over 100mm Crush (20mm), 300mm Subgrade Preparation would cost in order of \$300/m2
4. Curb and Gutter replacement cost assuming City of Grande Prairie 190-500 Standard Barrier section and removal of old curb and gutter
5. Total Estimated Cost includes 20% Contingency to cover cost of miscellaneous items like pavement markings, concrete sidewalk ramps, signage and traffic signals plus 12% Engineering

<b>Arterial Road Pavement</b>	Removals	\$	10	m2	
	125 ACP	\$	45	m2	
	300 GBC	\$	30	m2	
	350 GSBC	\$	40	m2	
	300 Sub Prep	\$	15	m2	
		<b>\$</b>	<b>140</b>	<b>m2</b>	
<b>PCC Sidewalk</b>	120mm Concrete	\$	120	m2	
	150mm 20mm Crushed Granular Base	\$	-	m2	Included
	300 Subgrade Prep	\$	-	m2	Included
		<b>\$</b>	<b>120</b>	<b>m2</b>	
<b>Paving Stone Sidewalk</b>	80mm Paving Stone	\$	300	m2	
	300 Subgrade Prep	\$	-	m2	Included
		<b>\$</b>	<b>300</b>	<b>m2</b>	
<b>Curb and Gutter</b>		<b>\$</b>	<b>160</b>	<b>lin. m.</b>	



# APPENDIX C

The Couplet and the Future of Downtown Grande Prairie



**CITY OF GRANDE PRAIRIE  
ADMINISTRATIVE REPORT**



**TO: Greg Scerbak  
City Manager**

**DATE: April 5<sup>th</sup>, 2011**

**FROM: Joe Johnson  
City Planner**

**SUBJECT: The Couplet and the Future of Downtown Grande Prairie**

**1. RECOMMENDATION:**

That Public Works Committee recommends Council terminate the couplet project completely; direct planning staff to update the Downtown Enhancement Plan accordingly and explore opportunities without the couplet project.

**2. INTRODUCTION:**

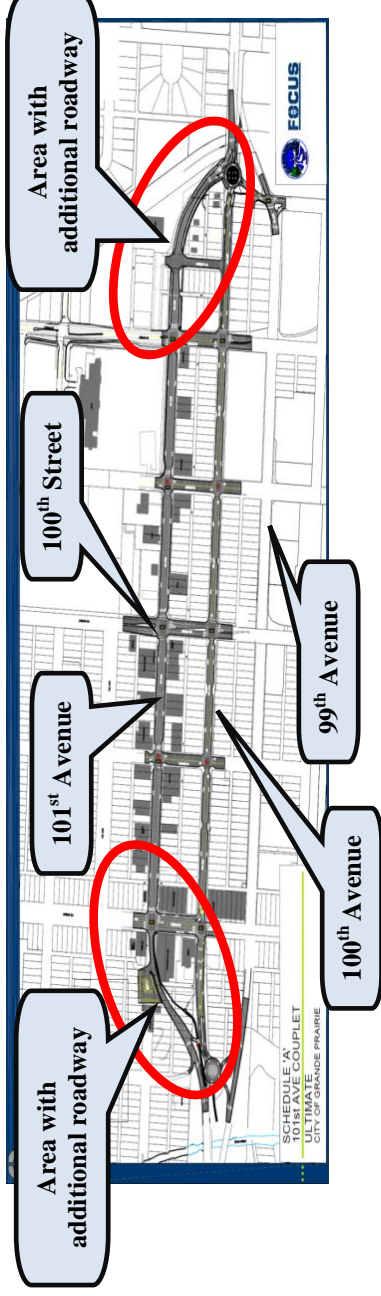
This report is intended as a preface to completion of a Terms of Reference to a review and update of the Downtown Enhancement Plan (DEP). Administration has undertaken an analysis of past land use policies and the underlying assumptions about, and implications for, moving traffic through the downtown area. This analysis begins with a discussion about the current DEP which proposes a major re-configuration of the existing transportation network. The transportation elements of the current plan have not been executed to date, yet would dictate fundamental future land use opportunities, directions of commercial growth, aesthetic and ambient qualities, patterns of parking demand, pedestrian movement, and public transit (including a new Downtown transit terminal).

**3. BACKGROUND:**

**Definition of Couplet:** A pair of one way streets that function as a single higher capacity street.

Typically couplets are separated by one city block. Based on that definition, the city already has a couplet system.

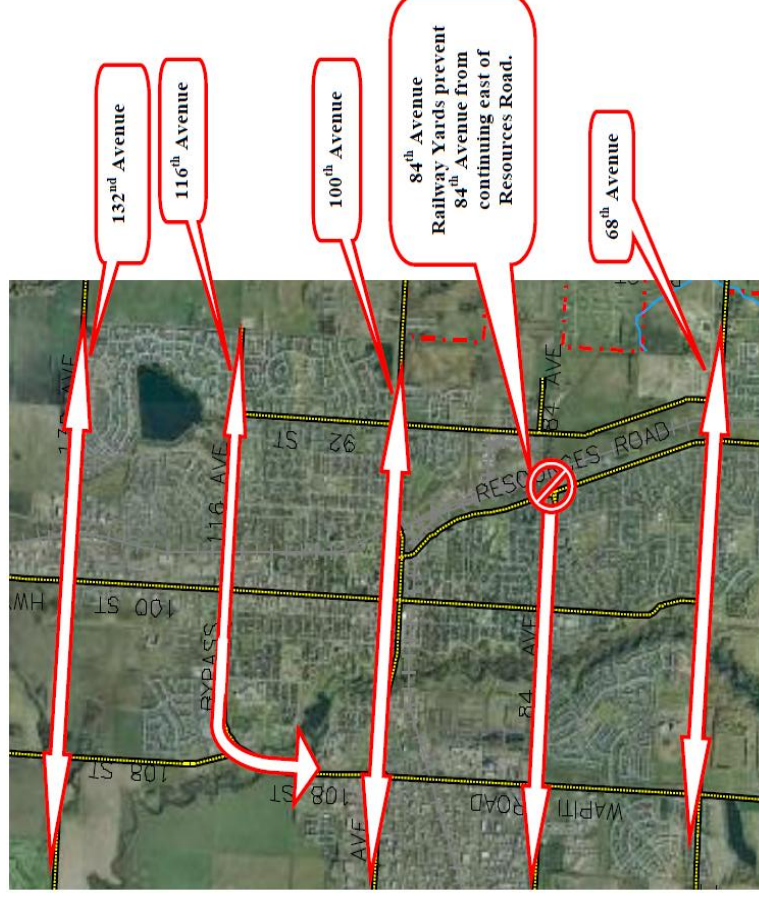
Since the 1980s, the city has maintained a plan to relocate westbound traffic that is currently on 100<sup>th</sup> Avenue to 101<sup>st</sup> Avenue. This project is consistently referred to as "The Couplet". **To remain consistent, the term "couplet" will be used in this report to refer to the 101<sup>st</sup> Avenue project.**



#### 4. PURPOSE OF THE COUPLET:

The primary purpose of the couplet is to add capacity to westbound traffic moving through the downtown core. 100<sup>th</sup> Avenue currently has two westbound drive aisles. The couplet project would see 101<sup>st</sup> Avenue having an additional drive aisle for a total of three. This will mirror the capacity of 99<sup>th</sup> Avenue which also has three drive aisles (eastbound). From a traffic perspective, additional lanes have a number of benefits. It decreases congestion that results from left and right turning vehicles, it spreads out the number of vehicles over three lanes instead of two, and it provides for more vehicle stacking at traffic lights.

The City of Grande Prairie has limitations with respect to East/West movements. The Bear Creek Corridor and the rail yard (adjacent to Resources Road) create difficult barriers. The only E/W corridors that transverse the city are 132<sup>nd</sup>, 116<sup>th</sup> (bypass), 100<sup>th</sup>, 84<sup>th</sup>, and 68<sup>th</sup> Avenues. 84<sup>th</sup> Avenue terminates at Resources Road. This funnels all of the traffic east of the tracks to either 68<sup>th</sup> or 100<sup>th</sup> Avenues.



## 5. DISCUSSION:

The Planning Department has been tasked with reviewing the Downtown Enhancement Plan. Through conversations with stakeholders and internal meetings, Planning staff have compiled a number of issues to be addressed in the plan. The issue of the couplet has proven to be “ground zero” for a number of these issues. Planning has comprehensively reviewed the idea of the couplet and as a result, has identified a number of concerns about the project. It is our desire to present some of these considerations to committee and council, provide a recommendation, and receive further direction.

### The History of The Couplet

The idea of the Couplet originated in the 1980s. It has appeared in planning documents ever since. Since its inception, the notion of the couplet and the underlying assumptions and reasoning behind it appear to have gone unchallenged.

### 1980s vs Today

In the 1980s, the dominant transportation planning practice in North America was to “build more capacity”. If there was an area that was experiencing congestion, the answer was to simply increase capacity. Increasing capacity is often achieved through the addition of lanes, signal synchronisation, and intersection improvements.

This approach was applied throughout the urban context, including downtowns. While these capacity-building measures are effective in accommodating more vehicles and enhancing traffic flow, the benefits can potentially diminish over time and have a negative impact on the built environment. For example: the pedestrian setting is negatively affected by lack of pedestrian amenities or an unwelcoming environment due to high speeds, extremely wide crossings, and a perception of vehicular priority.

In recent years, more attention has been placed on the impact of the design of roadway systems on the overall quality of built environments. The emerging model is commonly referred to as “complete streets”. The complete streets idea incorporates many other goals and considerations than simply moving traffic. Aesthetics, pedestrians, cyclists, and the overall look and feel of the roadway are all serious considerations. That is not to say that traffic and congestion are ignored and deemed unimportant, but rather that the other factors are considered equally.

It is important to note that the complete streets model is not the answer in every case. In fact, discretion must be applied as to where this model is implemented. For example, in the case of the Highway 43 Bypass and other major arterial roads, it makes sense to add lanes and improve intersections because moving traffic is all the bypass is intended to do. Examples of appropriate locations for a complete street model include downtowns, high density residential districts, and other commercial/residential nodes.

*“If you plan for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places.”*

~Project for Public Spaces

## Induced Traffic

*“Trying to cure traffic congestion by adding more lanes is like trying to cure obesity by loosening your belt.”* ~Lewis Mumford

**Definition of Induced Traffic:** The phenomenon whereby attempts to decrease congestion through a roadway capacity improvement induces new vehicle trips in that corridor (IE: the improvements of roadways encourages new trips from existing land uses)

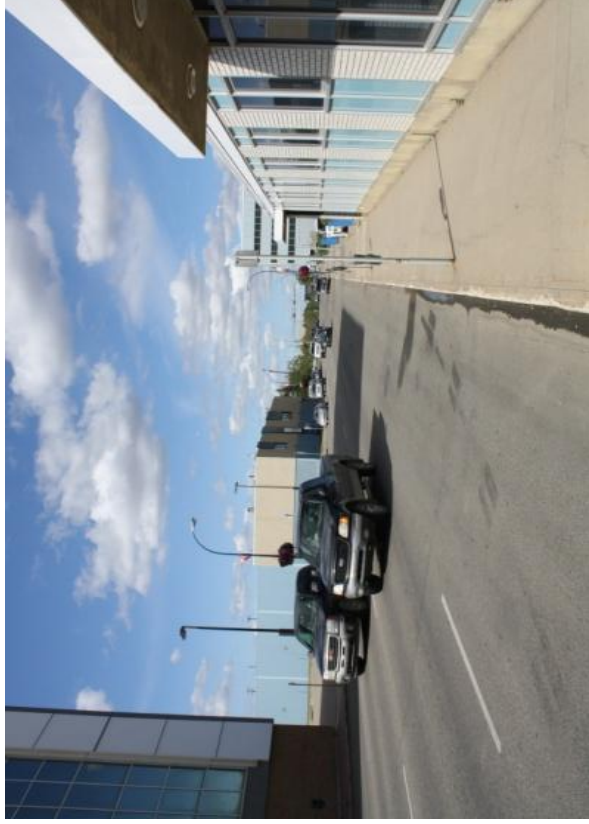
By creating the conditions that induce traffic it is possible that the couplet, by way of easing traffic movement through the downtown core, will attract vehicle trips that do not currently use that route. The end result could be a road with similar levels of congestion as the existing network. For example, a resident that lives in the Crystal Heights/Ivy Lake neighbourhood may currently travel north to 116<sup>th</sup> Avenue to get to the west end of the city. They may do this because they do not want to drive through the downtown. However, if the couplet is built, that person may then choose to drive through the downtown because it is easier and quicker than it was before. Eventually, as more and more people come to the same conclusion, the additional capacity that was developed is used up and congestion returns.

## Existing Downtown Grande Prairie

Currently, 100<sup>th</sup> Avenue is a vibrant commercial strip, the most successful area in the downtown core (especially between 99<sup>th</sup> and 101<sup>st</sup> Street). The streetscape, business exposure, dense concentration of commercial outlets, walkability, and slower traffic all combine to make a completely successful downtown core. Many urban centers have downtowns in decline whereas Grande Prairie’s downtown is quite healthy. Given its high exposure to vehicular traffic, 100<sup>th</sup> Avenue attracts a lot of businesses. Due to the design of 100<sup>th</sup> Avenue, traffic travels at a reasonable speed. In many ways, 100<sup>th</sup> Avenue is a lot like Whyte Avenue in Edmonton.



The eastbound traffic on 99<sup>th</sup> Avenue travels at a greater speed than on 100<sup>th</sup> Avenue. 99<sup>th</sup> Avenue is a vehicle dominated environment where the vehicle is accommodated above all else. There are no mid block crossings or other pedestrian amenities. Furthermore, there isn't much of a "draw" to 99<sup>th</sup> Avenue from a consumer's perspective. The end result is a sterile environment that does little to contribute to a downtown environment.



### **The Future of 100<sup>th</sup> Avenue**

Planning staff have concern over the future of 100<sup>th</sup> Avenue should the couplet project be constructed. The primary intent of the couplet project is to "bypass" the downtown; that is, to remove westbound traffic from 100<sup>th</sup> Avenue and relocate it to 101<sup>st</sup> Avenue. While the idea of making 100<sup>th</sup> Avenue an idyllic destination environment with quieter and calmer traffic sounds appealing, there are a number of potential negative consequences that must be discussed.

Perhaps the primary consideration in business is its location. This is acknowledged in the catchphrase, "location, location, location". The majority of businesses in the downtown are retail and/or customer oriented in some fashion. This type of business is heavily reliant on exposure. Every time a person drives down 100<sup>th</sup> Avenue they are subjected to storefronts, signage, and window displays. While the traffic on 100<sup>th</sup> Avenue can be loud, intense, and frustrating at times, it does provide the businesses along 100<sup>th</sup> Avenue the exposure that they rely on to succeed. Planning is concerned that the removal of traffic from 100<sup>th</sup> Avenue will have a detrimental impact on this exposure and ultimately the success of businesses located there. This could be realized by a migration of businesses from 100<sup>th</sup> Avenue to other areas of the downtown or the city.

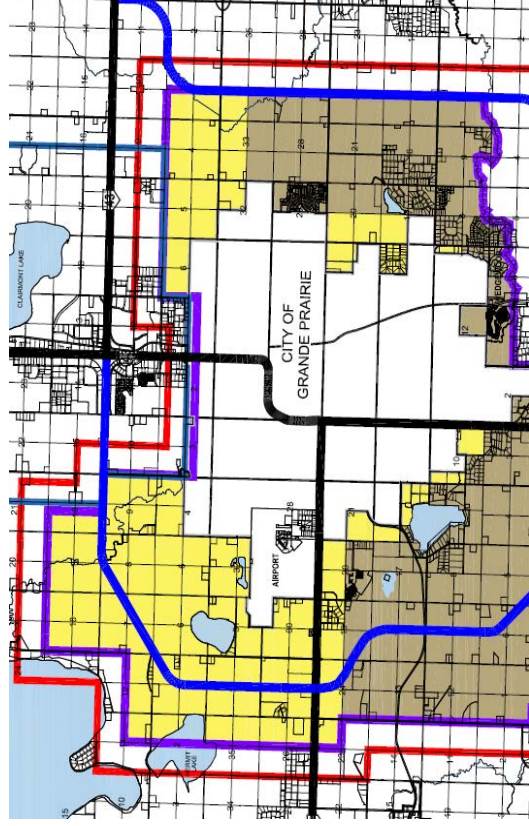
The west end of 100<sup>th</sup> Avenue in the Park Hotel/Germaine Park area is ripe for redevelopment. Reduced exposure on 100<sup>th</sup> Avenue could have a negative effect on the redevelopment of this area as redevelopment interests may be directed more to 101<sup>st</sup> Avenue.

## Safe Growth & CPTED (Crime Prevention Through Environmental Design)

The current traffic through the downtown adds an important element of “natural surveillance”. Natural surveillance limits the opportunity for crime and undesirable behaviour by taking steps to increase the perception that people can be seen. Applied to 100<sup>th</sup> Avenue, passing motorists, by way of presence alone, deter undesirable activity such as vandalism, theft, and other acts of public disturbance. Currently there is a steady flow of traffic on 100<sup>th</sup> Avenue at all times of day and night, every day of the week. With the couplet project, 100<sup>th</sup> Avenue traffic would be relocated to 101<sup>st</sup> Avenue, which would result in 100<sup>th</sup> Avenue being an area where very little traffic would be seen in the evenings and throughout the night.

## Future City Growth

One of the primary reasons in support of the couplet has been to allow the city to grow to the east. Again, the idea of the couplet originated in the 1980s. At that time, the assumption was that the city would grow in all directions. Since that time, adjacent county development has limited the City’s ability to grow to the east. Furthermore, the recently adopted Intermunicipal Development Plan sees the primary focus of city growth being in the north-west quadrant with little opportunity for annexation and/or development on the east side.



## 2 Lanes vs. 3 Lanes

The primary reason for the couplet is to facilitate westbound traffic through the downtown. The couplet is approximately four blocks long, stretching from 98<sup>th</sup> Street to 102<sup>nd</sup> Street. East of the downtown, this traffic travels on one lane. West of the downtown, this traffic travels on two lanes. The preliminary findings of the ongoing City of Grande Prairie Transportation Master Plan have shown that providing three lanes for a four block portion of 100<sup>th</sup> Avenue is not an appropriate solution to a city wide problem.

## **Congestion in the Downtown**

In many cities, the downtown core is devoid of activity. One often gauges a downtown's success on the level of activity it has on a day to day basis; traffic being one component of that activity. In our city, the downtown is busy. It is bustling. It is lively. This is in large part due to the traffic that passes through. From that perspective, congestion is a good thing.

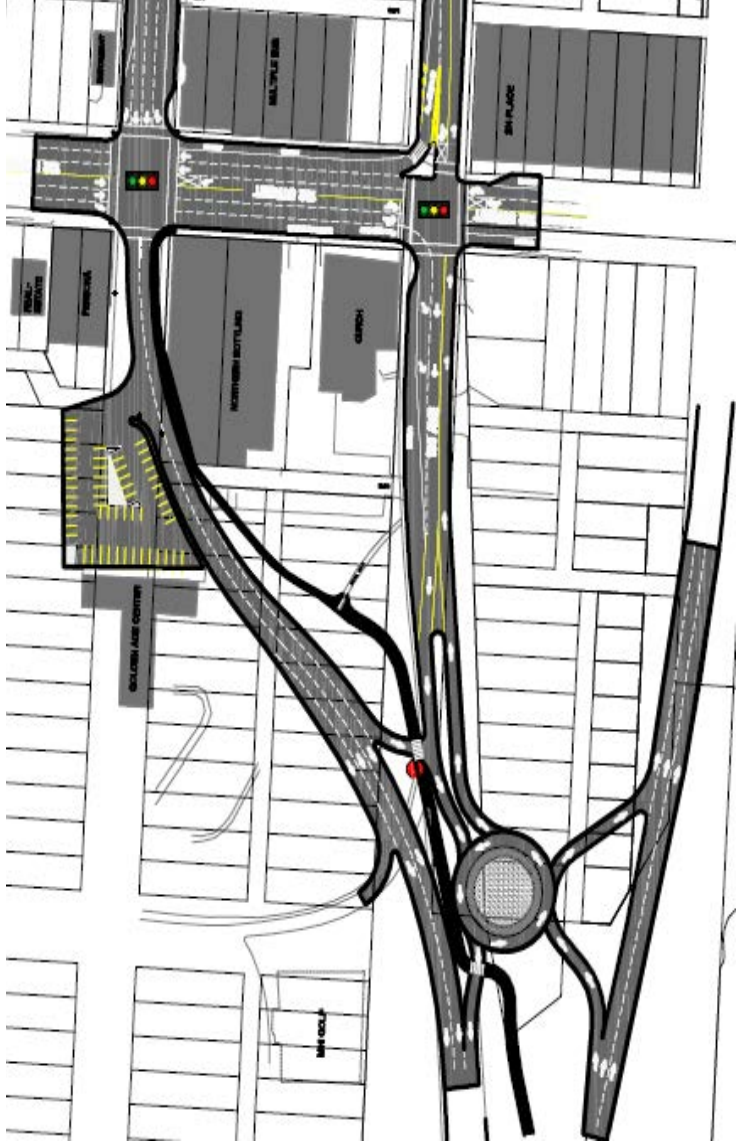
Furthermore, driver's expectations are that downtowns are busy and congested at times. Slower traffic and congestion are realities associated with any downtown environment, and again, contributes to the vibrancy of an area.

The "congestion" on 100<sup>th</sup> Avenue occurs during peak hours and for very short periods of time. There are three notable "rushes"; one in the early morning, another at lunch hour, and a final one near the end of the work day. The majority of the time, 100<sup>th</sup> Avenue has a steady flow of traffic that comes in waves based on the synchronization of the traffic signals.

## **Muskoseepi Park**

The west end configuration will have a major visual and functional impact on Muskoseepi Park. The current configuration is an attractive entrance into the downtown complete with mature trees, lots of green space, and minimizes hard surfaces. Drivers experience Muskoseepi Park from their vehicles. The introduction of additional roads and the removal of mature stands of trees will change this area from a park-like setting to something much less attractive.





### Cost

Between the cost of construction and land acquisition, the couplet will cost several million dollars. Many improvements could be made to the downtown that will absolutely enhance the area including replacing red-brick paving stones with new concrete sidewalks, new street trees, public art, street furniture, and more.

## **Roundabouts**

Roundabouts (different from traffic circles) are an extremely useful transportation design that eliminates the need for a stop-controlled intersection, provides for a legal u-turn movement, reduces noise levels, and decreases the severity of collisions.

There are roundabouts on both the east and west end of the proposed couplet system. The roundabouts are designed to provide access to 100<sup>th</sup> Avenue from either 99<sup>th</sup> or 101<sup>st</sup> Avenue. They are also necessary to provide an eastbound option for drivers leaving the Golden Age Centre.

The roundabouts in the couplet would be the first in the City of Grande Prairie. Due to the differences in traffic movements, as compared to a conventional intersection, there will be an adjustment period for motorists. It would be ideal if the City had a roundabout located elsewhere in order to introduce the concept of roundabouts to motorists. This would enable the City to learn from the successes and failures of the design prior to implementation in a major network such as the downtown. The use of roundabouts in the couplet system is somewhat risky as the design is reliant on the roundabouts succeeding. Should a shortcoming become apparent, retrofitting the design could prove costly and/or impossible. Also, due to the geometric design of the roundabout, winter maintenance could be challenging.

## **Opportunities without the Couplet**

There are a number of opportunities that present themselves should the City decide not to follow through with the couplet project.

First and foremost, the cost savings would be significant. As stated earlier, the city could choose to redirect some of that funding toward other much needed improvements in the downtown.

Secondly, the downtown would continue to function as a highly successful commercial area. The Park Hotel/Germaine Park area will eventually redevelop completing 100<sup>th</sup> Avenue.

Finally, the city has already assembled a significant area of land near the Rotary House. This presents a number of development opportunities, public and/or private. The site may be a suitable location for a new public transit terminal, or the city could consolidate a lot of the land and sell it to a developer with/without development conditions.

## **6. OPTIONS:**

City Council should consider the following options:

- 1) Maintain the couplet project; direct planning staff to update the Downtown Enhancement Plan with the couplet project in the near future.
- 2) Suspend the couplet project indefinitely; direct planning staff to update the Downtown Enhancement Plan with the couplet project in the future with no timeline.
- 3) Terminate the couplet project completely; direct planning staff to update the Downtown Enhancement Plan and explore opportunities without the couplet project.

## **7. SUMMARY/CONCLUSION:**

The purpose of the report is to present Council with some considerations with respect to the proposed couplet project. It is Planning staff's opinion that this project has the potential to have a negative impact on the existing downtown core while doing little to solve city wide transportation issues.

If the absolute goal is to facilitate moving traffic E/W through the downtown core, then the couplet project is the answer. It will add capacity to the roadway, has the potential to relieve periods of congestion on 100<sup>th</sup> Avenue, and may "absorb" some of the congestion from other areas of the city. However, the only goal of the couplet project is to facilitate traffic movement. It is not an idea based on downtown vitality, revitalization, streetscape improvements, etc.

For the many multi-faceted reasons contained in this report, it is recommended that council abandon the proposed couplet project.

## **Attachments**

1. The Couplet System

## ATTACHMENT 1 – The Couplet System





# APPENDIX D

## Visioning Workshop #1 Materials & Results

**QUESTION #1: What Is the best thing about Downtown Grande Prairie?**

CATEGORY	COUNCIL GROUP 1	COUNCIL GROUP 2	COUNCIL GROUP 3	DOWNTOWN BUSINESS ASSOCIATION
VISION / DOWNTOWN FEEL	Central avenue	100th Avenue & 100th Street as perceived central point of Downtown	Compact & well defined Downtown area	People
	Compactness of 100th Avenue	Historic buildings	Long summer days	
	Hubs		Muskoseepi Park as the jewel of the City	
GATEWAYS / SIGNAGE	Cleanliness			
	High visibility of Downtown			
	Proximity to Muskoseepi Park			
	Proximity to neighbours			
LAND USE / ACTIVITY	Variety of uses (govt, retail, recreation, art gallery)	Variety of services (pharmacy, law office, etc)	Classier restaurants are opening	Unique, Boutique retailers
	Quaint, unique, boutique shops	Unique, niche, owner operated stores	Montrose Cultural Centre	Street performer festival
	Local restaurants	Farmer's Market	Grande Central Station south of tracks being redeveloped	Sidewalk sale
	Montrose Cultural Centre (Teresa Sargent Hall)	Festivals, especially those with street closures (Canada Day, Halloween Walk, Zomble Walk, Santa Claus Parade)	Infill development beginning on fringes of Downtown	Affordability of Downtown
	Farmer's Market	Shopping events		
	Downtown festivals	Art Gallery		
	Street performers	Important centres: recreation, "towne", cultural, city hall		
	Revolution Place (Crystal Centre)	Muskoseepi Park as the "central place" for Grande Prairie		
	Public facilities / services	Four season activity		
	Sidewalk cafes			
PEDESTRIAN / VEHICULAR MOBILITY	Central Downtown location		Proximity & access to Muskoseepi Park & creek	Central location
	When 100th Avenue is closed to vehicular traffic		Walkable scale	
	Ample parking			
URBAN PLANTING	Flower baskets			Flower baskets
				Tree with lights
				Trees on Richmond Avenue
STREETSCAPE TREATMENTS	Painted benches		Street furniture on 100th Avenue	
	Utility box murals			
	Wide sidewalks			
	It is a blank slate			

common response

**QUESTION #2: What is currently missing from the Downtown?**

CATEGORY	COUNCIL GROUP 1	COUNCIL GROUP 2	COUNCIL GROUP 3	DOWNTOWN BUSINESS ASSOCIATION
VISION / DOWNTOWN FEEL	Eyes on the street	Activity when there are no events/festivals	Complete community feel	Creation of an atmosphere
	Identity		Continuous built form along streetscape	
	Quieter & more pedestrian friendly main street		Higher density	
	Standards for beautification		Good architecture	
GATEWAYS / SIGNAGE	Gateway signage for events	Entry signage	Visual access to creek	Coordinated signage & entry features for public realm
				Incentives for signage standards
				Wayfinding guidelines
LAND USE / ACTIVITY	Mix of uses	Residential	Mixed use development with retail at grade, residential above	Concert venues
	More residential (apartments, condos)	Stores open on evenings & weekends	Residential (attractive living spaces for the young population)	
	Boutique hotel	Nice Downtown park (Jubilee Park has potential)	Hotels	
	Businesses to attract & retain people after 6pm, encouraging night life		Shops open past 6pm	
	Public plaza / gathering place with water feature		Jubilee park underutilized	
	Cinema		Larger theatre	
	More outdoor / rooftop patios		Outdoor patios	
	Small pubs		Night life	
	Food trucks		Food trucks	
	New construction		Facilities to allow outdoor activity in winter	
	More streets active with shops		Arts centre	
	Art & culture		Washrooms Downtown	
	More activity / festivals		Outdoor recreational activities	
	Designated areas for festival events			
	Stores open during street events			
	Buskers			
	Range of retail (500sqft niche stores to larger format brand name & national retailers)			
PEDESTRIAN / VEHICULAR MOBILITY	Walkability	Pedestrian linkages and connections from node to node	Pedestrian connectivity (north-south connections)	Parking designed for everyday Grande Prairie vehicles (trucks)
	Connectivity to Muskoseepi Park	Accessibility & safety to off-street parking lots	Connectivity to Muskoseepi Park	
	Consistent street snow removal	Free parking	Connectivity to parking lots & safe parking conditions	
	Sidewalk snow removal		Snow removal	
	Calm main street		Traffic calming	
	Transit terminal / hub		Transit	
	Free regular transit shuttle service		Parking (perceived lack of parking, especially for trucks)	
	Non linear paths		Designated pedestrian areas	
			Road diet	
			Couplet on 101st Avenue and 99th Avenue; two way Alternate thoroughfare during festivals	
URBAN PLANTING	Trees			Street trees (but ones along Richmond Avenue block storefront signs)
	Landscaping in street			Tree lighting (no access to electricity)
				Consistency of existing street trees
STREETSCAPE TREATMENTS	Public art		Street furniture	Grate removal or replacement for dead trees
			Recycling facilities	Public art (sculpture)
			Storm sewers on Streets	Consistent, low maintenance sidewalk materials
				Well maintained & accessible sidewalks
				Streetscape character

common response

QUESTION #3: What makes a good Downtown?				
CATEGORY	COUNCIL GROUP 1	COUNCIL GROUP 2	COUNCIL GROUP 3	DOWNTOWN BUSINESS ASSOCIATION
VISION / DOWNTOWN FEEL	<b>Sense of comfort &amp; safety at all hours</b>			Feeling of safety
	Appeal for all age groups			Well maintained
	Cleanliness			
	Cohesiveness			
	Comfort			
	Continuous frontage			
	Diversity of demographics			
	Happy people			
	Human scale			
	Sense of place			
GATEWAYS / SIGNAGE	Uniqueness			
	Warm weather			
	Wayfinding			
LAND USE / ACTIVITY	<b>24/7 activity</b>		<b>Night life</b>	<b>24/7 activity</b>
	<b>Residential / multi-use buildings</b>		<b>Residential</b>	<b>Residential</b>
	<b>Mix of uses (shopping, restaurants, residential)</b>		<b>Variety of services</b>	<b>All season use (skating rink)</b>
	<b>Parks with features (water features)</b>		<b>Functional Downtown parks</b>	<b>Waterfront</b>
	Unique shops			<b>Water features</b>
	Informal gathering places & rest stops			
	No dead spaces / empty parking lots			
	No building vacancy			
PEDESTRIAN / VEHICULAR MOBILITY	Art & culture			
	Things to see & do			
	<b>Transit</b>			<b>Transit accommodation (shuttle buses with parking outside of Downtown)</b>
	Walkability			
	Pedestrian priority			
	Sense of pedestrian safety			
URBAN PLANTING	Pedestrian malls / streets			
	Connectivity throughout Downtown & to public service buildings			
	Good parking			
STREETSCAPE TREATMENTS				Planters
	Beautification			Flower baskets
	Storefront interest		Larger sidewalks	Public art (fake people)
	Vibrant / colourful			Safe sidewalks
	Visual interest			

common response

**QUESTION #4: What are the biggest opportunities for the Downtown?**

CATEGORY	COUNCIL GROUP 1	COUNCIL GROUP 2	COUNCIL GROUP 3	DOWNTOWN BUSINESS ASSOCIATION
VISION / DOWNTOWN FEEL		<b>To marry with the existing strong cultural aspects of the Downtown</b>	<b>Cultural draw</b>	Sense of entering a place
		Council & City staff support of vision	Clock tower	Creation of a Downtown "brand"
		Expansion of Downtown scope		
		To develop theme and identity around the resource industry—potential good partnership possibility, highlight positive aspects of the industry, latest sustainable initiatives, etc		
		To maintain a progressive and modern identity as a very young city—don't duplicate the heritage focus of all the other Alberta cities—celebrate the modernity		
GATEWAYS / SIGNAGE		<b>Entrance features to identify Downtown</b>	<b>Create a draw into Downtown</b>	<b>Gateways into Downtown (100th &amp; 99th Avenue travelling west; 100th &amp; 99th Avenue travelling east; 100th Street travelling north &amp; south)</b>
		<b>Gateways</b>	<b>Gateway from the west</b>	<b>Signage with Downtown "brand"</b>
			Uniform signage & wayfinding	
			Muskoseepi Park gate	
			Plaques showing history of buildings	
LAND USE / ACTIVITY		<b>Regular, scheduled street closure (outside of rush hours and other high traffic times) to coincide with downtown events and festivals</b>	<b>Hub of activity at Montrose site</b>	<b>Montrose site to be planned as a whole</b>
		Need to facilitate downtown intensification and residential development—what can council and staff do to achieve this: look at development charges downtown and in suburb, downtown breaks, etc	<b>Regular road closures for entertainment</b>	Montrose site uses could include theatre, archives, plaza, linkages to other parks
		Focus on redeveloping transitioning residential—area where homes are becoming offices, next to downtown commercial	Alley rejuvenation (coffee shops)	Dense population of residents to support potential pedestrian street
		Greenroof/patio opportunities on flat roof, 100 Ave stores	New City Hall building	
		Promote tourism		
PEDESTRIAN / VEHICULAR MOBILITY		<b>Strong connections to Downtown</b>	<b>Pedestrian connections &amp; corridors</b>	<b>Expand Downtown from just 100th Avenue with north-south pedestrian connections</b>
			<b>Road diet</b>	<b>Traffic calming along 100th Avenue</b>
			<b>Use 100th Avenue as main two way street</b>	<b>Revisit idea of relocating one way to 101st Avenue with transit on 100th Avenue</b>
			Connectivity to Muskoseepi Park	100th Avenue as pedestrian only
URBAN PLANTING				Connect Montrose site to Downtown
STREETSCAPE TREATMENTS		Paving treatments to characterize Downtown	Opportunity for stormwater management troughs on Streets	Furniture with Downtown "brand"
			Patio extensions - businesses pay to close parking stalls	Replace utilities when sidewalks are being redone
			Public art, statues	

common response

## ENGAGING THE COMMUNITY: What are the best opportunities to engage the community in this process?

### COUNCIL WORKSHOP RESPONSES

#### Concerns:

The Downtown Enhancement Plan was only created in 2004 - people might be skeptical of another visioning process and no action  
Ask question in context with a report  
Need to close the loop and show that something is going to happen  
Here's what we heard and how it fits into the project  
Importance of educating the community along the way so they aren't surprised by anything  
Downtown Business Association needs to be a part of things  
Divide on Councillors who want broader public feedback and those who want to take action right away  
Most want vision first before going to public  
Need political will to resource this vision or they will be subject to criticism  
Public consultation early enough in the process allows for a lot of flexibility  
Share "what we heard" reports

#### Venues for Public Engagement:

East End Centre  
Spread throughout the City  
Grande Prairie Mall  
14th Place  
Windsor Court  
Transit Stops  
Outside of Downtown  
Website  
Schools  
Social media  
Physical installation to catch attention  
Resources Road  
Temporary billboard, banner, etc.  
Costco

#### Questions to ask:

Would you live Downtown?  
What would make you want to live Downtown?  
Open-ended question is key  
Challenge attitudes of Downtown Business Association  
Opportunity for a follow-up question? What are the reasons you don't go Downtown?

## ONE THING: What is one thing that stands out for you most from this session?

### COUNCIL WORKSHOP RESPONSES

Council direction  
Length of the project  
Common views among Councillors & administration  
Can't drag on for fear that next Council will stop the process  
Need a vehicle to achieve the vision other than the City itself - leverage private sector, development corporation?  
Council needs to incentivize development  
Density is cheaper to service than sprawl  
Good workshop process  
Good approach to analyzing the full package of Downtown (underground, above ground, land use, etc.)  
Council now to put wheels in motion  
Reality check from engineering point of view  
Reality check from engineering point of view

## What does success look like for you?

### DOWNTOWN BUSINESS ASSOCIATION WORKSHOP RESPONSES

If City puts funding in the three year budget  
If the people of Grande Prairie say "Wow, Downtown looks fantastic!"  
Attracting interest from other cities  
24/7 activity  
Mixed use developments  
If everyone involved does their job as best they can  
Coordination of a Downtown theme without crossing over into the independence of the shop owners  
Incentives for building improvements  
Planning of publically owned spaces  
Street trees  
Consistency as well as uniqueness for businesses  
Driving into Downtown and feeling like you've entered a different place

# APPENDIX E

Visioning Workshop #2 Materials & Results

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**COUNCIL: WHAT MAKES A GREAT STREET?**

- Character; narrow
- Sunlight; solar access
- Freedom of movement; entries / exits
- Penetration
- Greenery; trees / baskets
- Asymmetrical approach
- Seasonality
- Biodiversity
- Programming opportunity
- Allow parking and transportation flexibility
- Walkability; materiality needs to be durable
- Cleanliness
- Water features / attractions
- In lieu of green, something else significant
- Mid-block crossings / penetration
- Urban form is visually permeable
- Architectural interest so that the architecture frames and creates the animation
- Go urban, bold
- Comfortable seating area
- Large pedestrian space
- No traffic
- Clean
- Identity and unique
- Public art
- Something of interest
- Greenery
- Tree canopy
- Visibility to shops / retail
- Winter infrastructure
- A good pub / restaurant
- Safety for women and families
- Great architecture
- Having women and families downtown
- Draws to downtown (square)
- Activities on the streetscape
- People
- Slower traffic
- Colour at day and night
- Wide sidewalks

- Heavily pedestrian friendly
- Street furnishings
- Historic lighting
- Flower beds
- Planters / lots of landscaping
- Specialty retail shops
- Tables and chairs on sidewalks
- Second level balconies
- Enhancements not just on one street
- Activity throughout the whole downtown; 24/7
- Lots of parking off the main street
- Historic buildings
- How do we decide on a classic, timeless theme?
- Use interesting materials rather than colour
- Gathering areas
- Pocket parks
- Outdoor seating areas
- Proximity of activity to outdoor seating
- Entrance feature
- Visual from an entrance feature
- "Wow" factor
- Activities downtown 24/7
- Snow clearing on sidewalk / safety
- Statues / furnishings might be a hindrance for snow clearing
- Lighting in winter

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#### DBA: WHAT MAKES A GREAT STREET?

- White Avenue came alive with more restaurants and pubs
- Independent restaurants
- Slow traffic
- Cleanliness
- Maintenance
- Greenery of some sort; trees / shrubs / flowers / colour
- Opulence
- Higher residential density so residents will use downtown shops as primary shopping sources
- Good sidewalks
- Safe sidewalks
- Access into buildings
- Convenience factor with parking

## Council and Downtown Association Visioning Workshop #2 Summaries

- Direct line of sight to parking and vice versa
- Easily identifies path to parking
- Access to parking
- Winter considerations – good lighting
- Active restaurants on streets; patios
- 24/7 activity
- Clarity of parking is lacking
- Clarity of shops is lacking
- Wayfinding
- No cohesiveness / uniformity
- Cluster of shops
- Easy access to information
- Adequate power to all power poles, making street events much easier
- Infrastructure in place for special events

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**COUNCIL: CROSS SECTION CUT AND PASTE EXERCISE COMMENTS**

- Don't have room for symmetry
- Need to move buildings
- Public realm on north side
- Do many little things well
- Restrict parking to shady side of street
- Bike lanes add a twist
- Need to consider safety aspects of bike lanes
- Conflict between cyclists, pedestrians, and vehicles exists and needs to be dealt with
- Bike lanes may be better suited on another street
- Need to create City-wide cycling network to address this issue
- Groups created own angled parking
- Many options have boulevard only on one side

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**COUNCIL: CROSS SECTION SCORECARD COMMENTS**

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**Likes:**

- Option 1:
  - Easy to implement
- Option 2a: N/A
- Option 2b:
  - Raised bike lane
- Option 3a:
  - Landscape on north
  - HOV parking
- Option 3b:
  - Flexibility
  - For 100<sup>th</sup> Avenue only
  - Pedestrian environment
  - 100<sup>th</sup> Avenue could be designated festival street
  - Not a bike City, so like that this one doesn't have bike lanes
  - Can change attitude of mixing pedestrian activity and traffic by using traffic calming measures
  - Road treatments and activation of spaces can serve as traffic calming
  - Pedestrian / parking lanes could be coloured concrete

**Dislikes:**

- Option 1: N/A
- Option 2a:
  - Preference to locate bike land inside of boulevard
- Option 2b:
  - Preference to locate bike land inside of boulevard
- Option 3a: N/A
- Option 3b:
  - Can't apply this option to entire downtown
  - Don't need parking on both sides
  - Heavy traffic while having festival; too busy; not pedestrian friendly
  - Maybe we need to stop thinking about 100<sup>th</sup> Avenue as the "Festival Street" and move it to 101<sup>st</sup> Avenue in front of the Montrose Site
  - Can't use pavers on road surface
  - Will be a major issue for snow removal

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**DBA: CROSS SECTION SCORECARD COMMENTS**

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**Likes:**

- Option 1:
- Option 2a: N/A
- Option 2b:
- Option 3a:
  - Opportunity to put awning with lighting along north side to make it more attractive
  - If vegetation doesn't work, replace it with something else
  - If there are other things that be done to make the south side with no landscape better, it is a good option
  - Thoughtful planting to meet conditions; change planting throughout year; shade planting opportunity on south side
  - Advantages to both sides of street
  - Don't need landscape on both sides
  - Opportunity to use different landscaping strategy on south side (i.e. planters with shade plants)
- Option 3b:
  - Flexibility
  - Business can access the additional front space
  - People will linger if there are pub establishments spilling out into the extra space

**Dislikes:**

- Option 1: N/A
- Option 2a:
  - Unless there is a bike plan in place or bike lanes elsewhere in the City, it is too preliminary to put a bike lane downtown
  - Don't see use for bike lanes
  - It would sacrifice space to put bike lanes in when they can't be used in winter
- Option 2b:
  - Unless there is a bike plan in place or bike lanes elsewhere in the City, it is too preliminary to put a bike lane downtown
  - Don't see use for bike lanes
  - It would sacrifice space to put bike lanes in when they can't be used in winter
- Option 3a:
  - Must consider cost of snow removal for merchants on wider sidewalk side
  - Centreline shift would have to close whole downtown during construction –
  - Visibility may be different from side to side
- Option 3b:
  - How does flush curb system work with snow removal? Same

**General:**

- Some members want practical improvements
- Some members agree that a complete redo of the streetscape will make a huge difference
- Suggest starting with 101<sup>st</sup> Street
- DBA seems to want expert opinion for recommendations – will not get 100% consensus on furnishings
- Need cost sharing agreement with Aquatera
- Still want answers to engineering questions; interruptions due to construction, timing, etc.
- Smart idea to start in lower impact area to make sure we get a good sense of how to deal with it
- Temporary water services during construction are a possibility to avoid service interruptions
- Old sewer main could continue functioning until new one is in service
- DBA is in charge of purchasing all of the street furniture – can't order new benches and garbage cans until we know the theme
- Talk of heated sidewalks – how much more expensive?
- Installing not much, but operation and maintenance costs are expensive

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**COUNCIL: KIT OF PARTS COMMENTS**

- Bold and assertive street furniture
- Maintenance access
- Localize furniture
- Stamp / brand the features for natural wayfinding
- Activate street with lighting
- Irrigation
- Silva cells
- Low value assessment versus infrastructure needs
- Infrastructure needs – technical consideration
- City lands – reduce stakeholder conflict
- Low tax \$ - increase tax base
- Align light poles for cross street lighting
- Irrigation for vegetation
- Brickworks – modern edging
- City doesn't pay for benches, trash receptacles, etc.
- Theming that supports industry (wood, oil, wheatshed, farm)
- Example – Kelowna seating; rock; history; memorialize
- Electrical strategy
- Don't like traditional / classic
- No cast iron
- Need unique idea for streetscape
- Banner brackets on all poles
- Traditional style for furnishings
- Contemporary style for planters (concrete, seating surfaces)
- Concrete paving
- Contemporary pageantry
- Trees for microclimate
- Accessibility for all ages
- Simple furnishings to make snow removal easier
- Locate bike racks where there is demand
- Awnings on buildings to create shelter in winter
- Industrial trucks may affect banners and lights that span across the street
- Hydraulic bollards at a few intersections to shut down street during street performer's festival
- Reduction of speed on 100<sup>th</sup> Avenue
- Paint intersections to create a visual differentiation throughout downtown
- Bump-outs at mid-block

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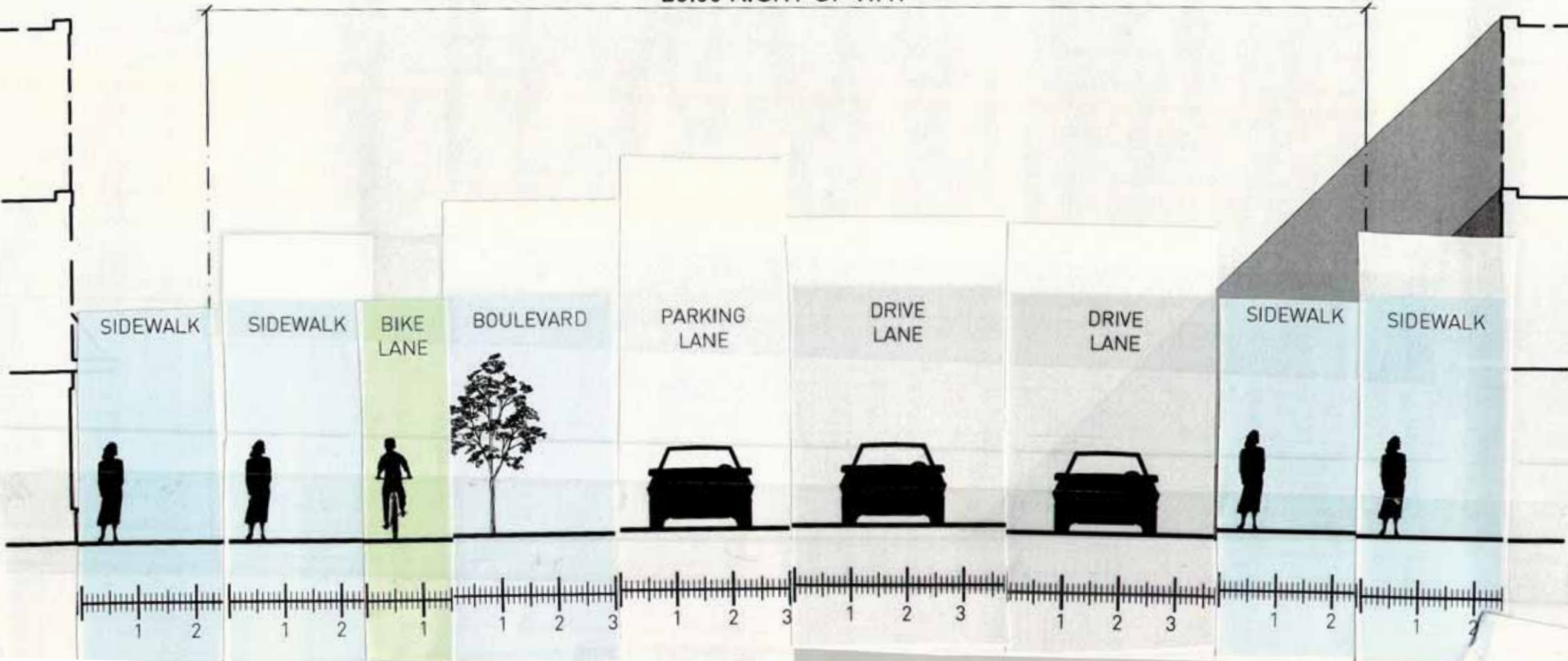
**COUNCIL: STREETSCAPE VISION RESPONSES:**

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- Clean and friendly
- People friendly; safe in the evening; actual people or more people living downtown; new building investment from what we are doing; somewhere my children will love to go when they are adults
- I would like to see a futuristic vision; no cowboy theme; no major theme; second storey restaurants and coffee shops; more residential living
- Streetscape shall be a clean, themed, inviting, pedestrian friendly environment that is conducive to attracting activity in the downtown
- Pedestrian focus; gathering places; consistency; need to slow traffic
- A pedestrian friendly, accessible area, well-marked, well lit, with dynamic and interactive attractions, with a variety of stores where people can shop, eat, and relax; green elements (live) and attractive lights for winter months are critical factors; it should accommodate all ages, from babies to seniors
- Streetscape vision is clean, well-maintained, intriguing detail, strong, consistent, pedestrian focused
- The streetscape should reflect the industries in which Grande Prairie's economy is built (oil, gas, forestry, agriculture); should also be uniquely Grande Prairie and a tourist draw
- The ideal streetscape for our downtown core would include a modern, stylized pedestrian boardwalk with naturalized accents (i.e. trees and stone / marble seating) with accessible power outlets and the ability for festooning / lights
- The downtown is a desirable place for residents to live and business to invest
- Grande Prairie downtown streetscape functions as a foyer to homes and businesses, making visitors feel welcome and residents feel they have arrived home
- A family focused, retail enhanced, interactive, community event capable, multi-purpose, urban looking heart of the City, where people live, shop, eat, and play
- Friendly, open, inclusive, places for people / events; public art; clean; more garbage cans / furniture
- Creating a safe, multi-modal network with a unique character
- Clean; practical; non-destructible

0 = not at all moderately	1 = slightly 3 = absolutely	2 =	Does this provide initial opportunities to improve the streetscape downtown in the short-term?	Does this set the stage for future redevelopment of downtown?	Will this help draw people to visit/shop/spend time downtown?	Will this make people comfortable downtown in both the winter and summer?	Will this help attract investment downtown?
COUNCIL RESPONSES							
Option 1: Basic Street Adjustment	25		23	23	22	20	
Option 2a: Complete Street [flush bike lane]	34		30	30	24	26	
Option 2b: Complete Street [separated bike lane]	35		30	32	31	27	
Option 3a: Centreline Shift [landscape on one side]	36		32	32	29	27	
Option 3b: Shared Festival Street	30		35	38	31	31	
DOWNTOWN ASSOCIATION RESPONSES							
Option 1: Basic Street Adjustment	13		7	7	8	7	
Option 2a: Complete Street [flush bike lane]	8		7	9	8	10	
Option 2b: Complete Street [separated blke lane]	11		12	11	12	13	
Option 3a: Centreline Shift [landscape on one side]	13		8	11	12	13	
Option 3b: Shared Festival Street	21		22	24	22	17	
COMBINED RESPONSES							
Option 1: Basic Street Adjustment	38		30	30	30	27	
Option 2a: Complete Street [flush bike lane]	42		37	39	32	36	
Option 2b: Complete Street [separated bike lane]	46		42	43	43	40	
Option 3a: Centreline Shift [landscape on one side]	49		40	43	41	40	
Option 3b: Shared Festival Street	51		57	62	53	48	

20.00 RIGHT-OF-WAY



20.00 RIGHT-OF-WAY

SIDEWALK

*Sidewalk*

BOULEVARD

BIKE  
LANE

PARKING  
LANE

DRIVE  
LANE

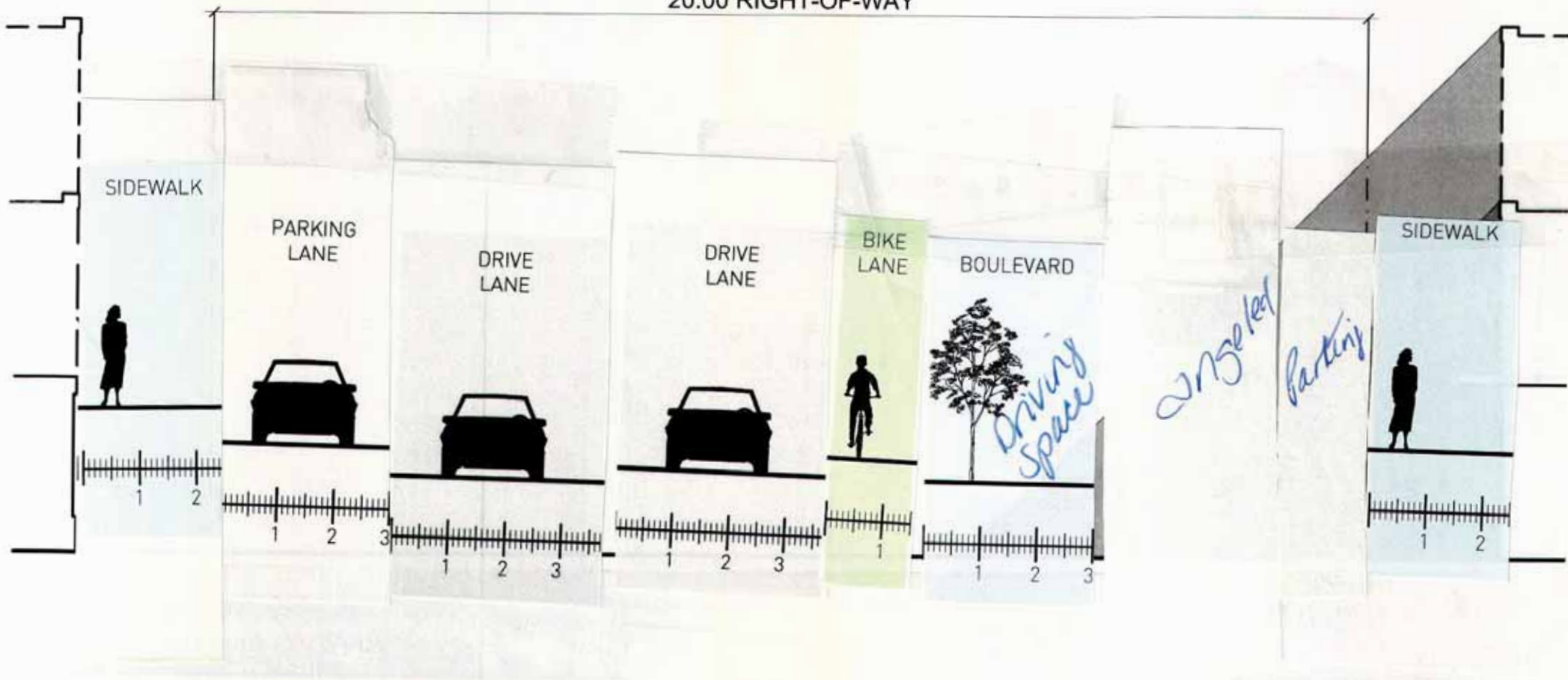
DRIVE  
LANE

PARKING  
LANE

SIDEWALK

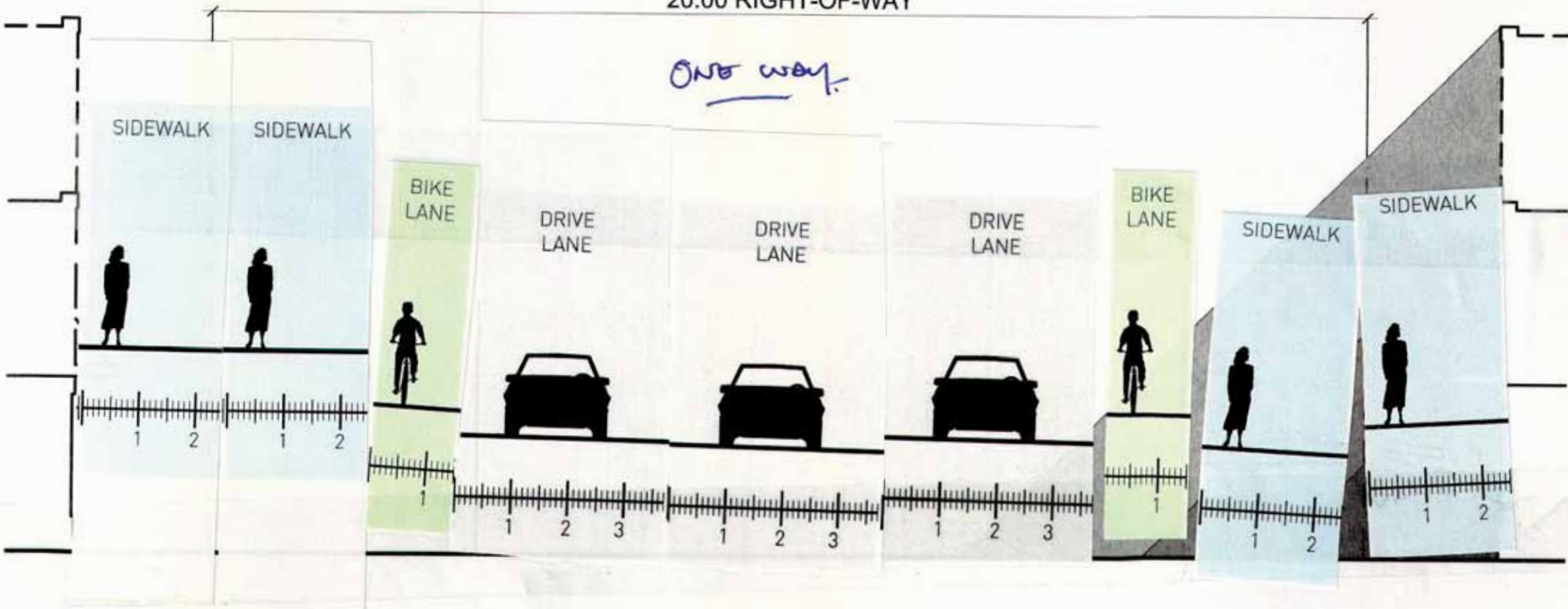


20.00 RIGHT-OF-WAY



20.00 RIGHT-OF-WAY

One way.



20.00 RIGHT-OF-WAY

SIDEWALK BOULEVARD

ANGLE  
PARKING  
LANE

DRIVE  
LANE

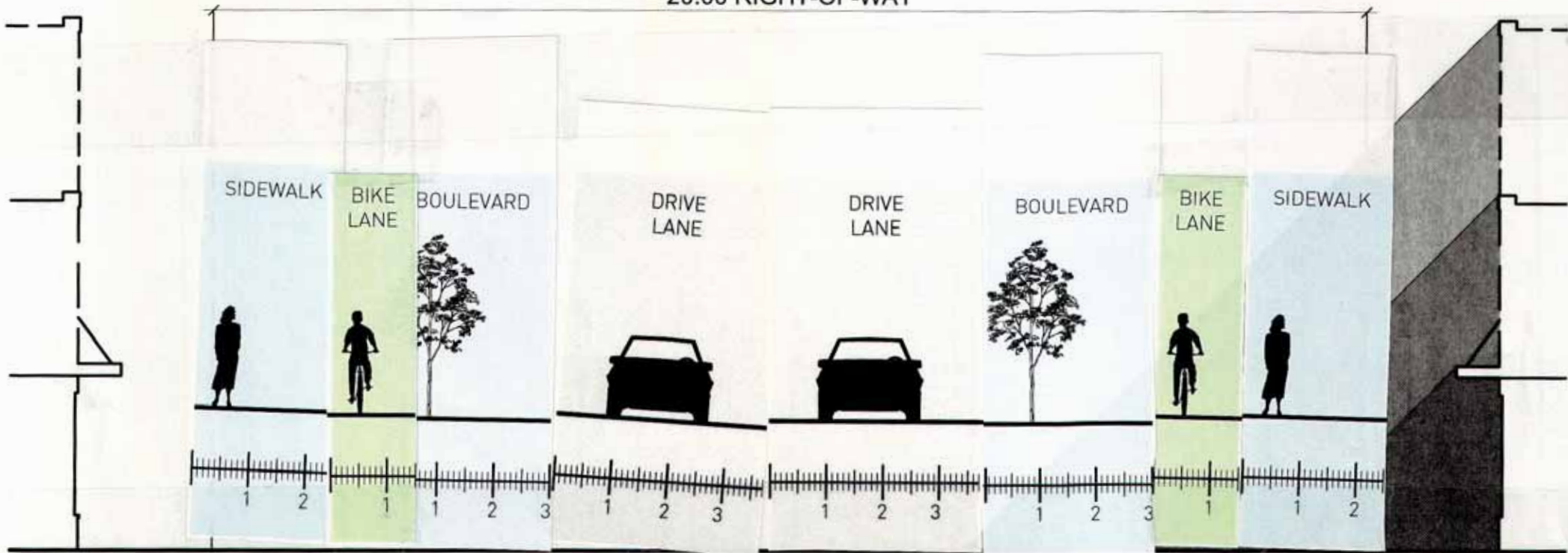
ANGLE  
PARKING  
LANE

BOULEVARD

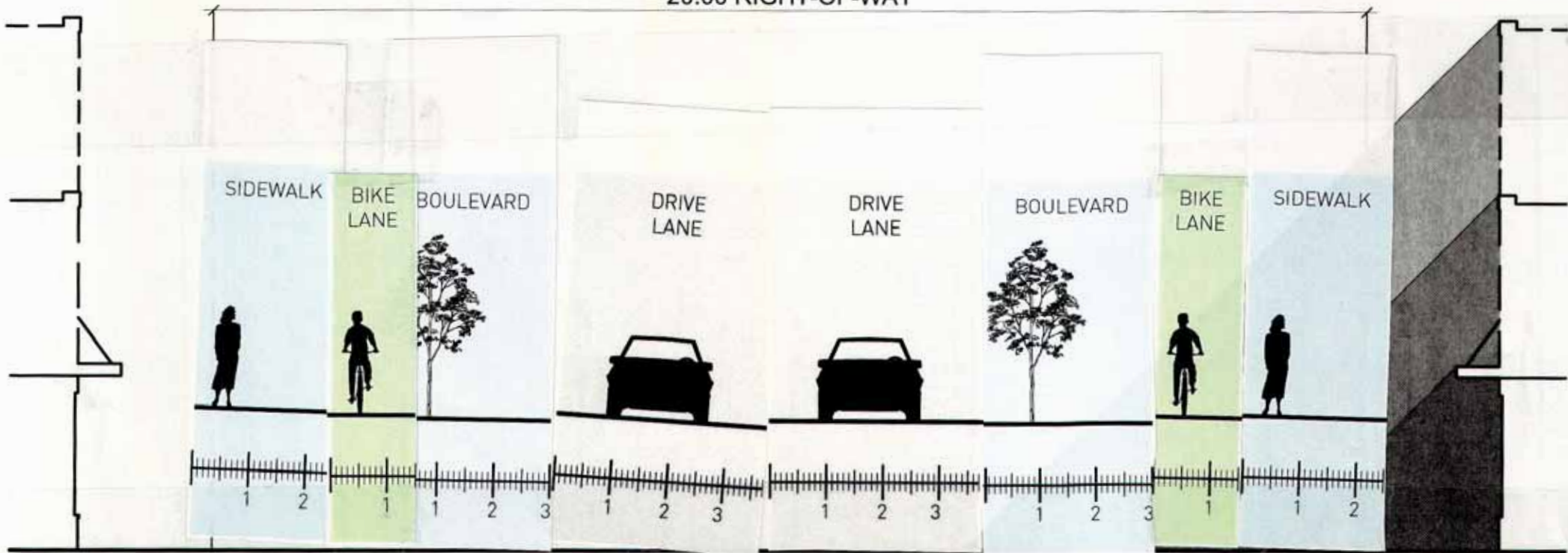
SIDEWALK



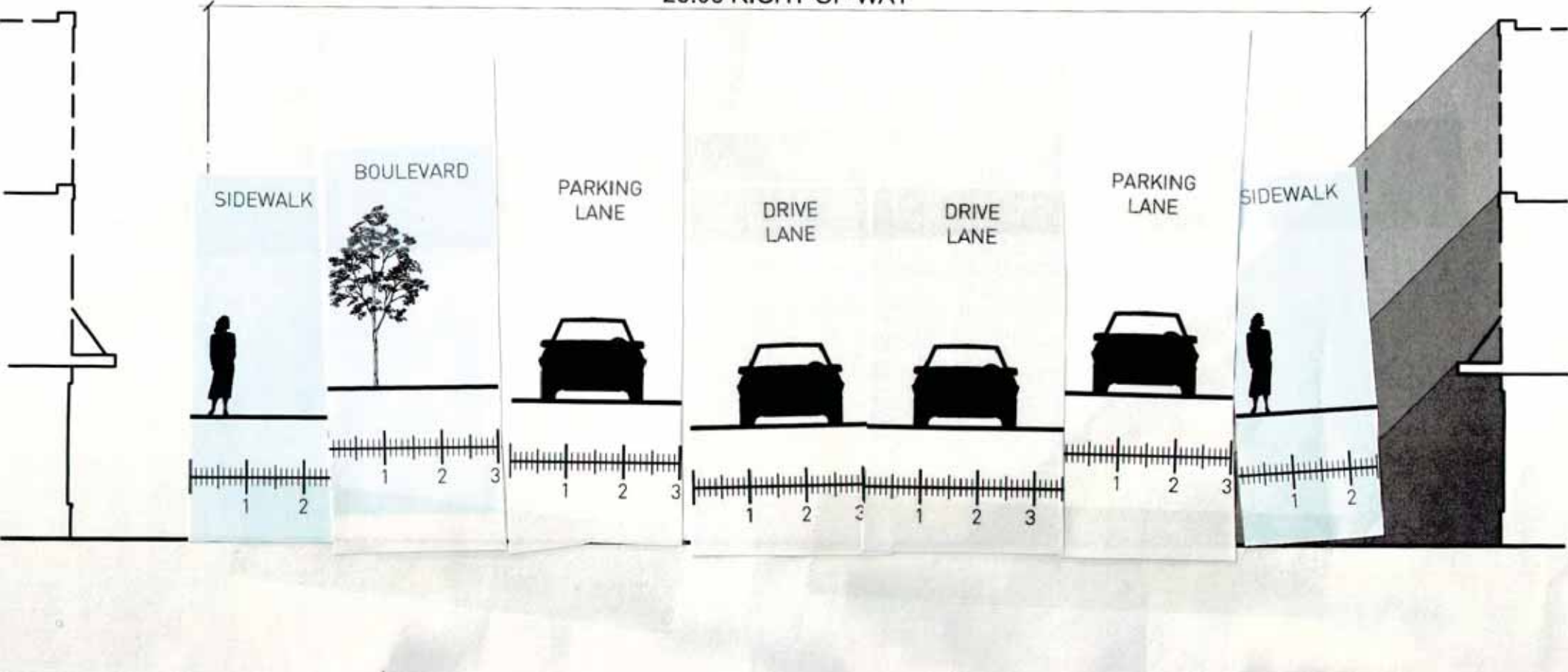
20.00 RIGHT-OF-WAY



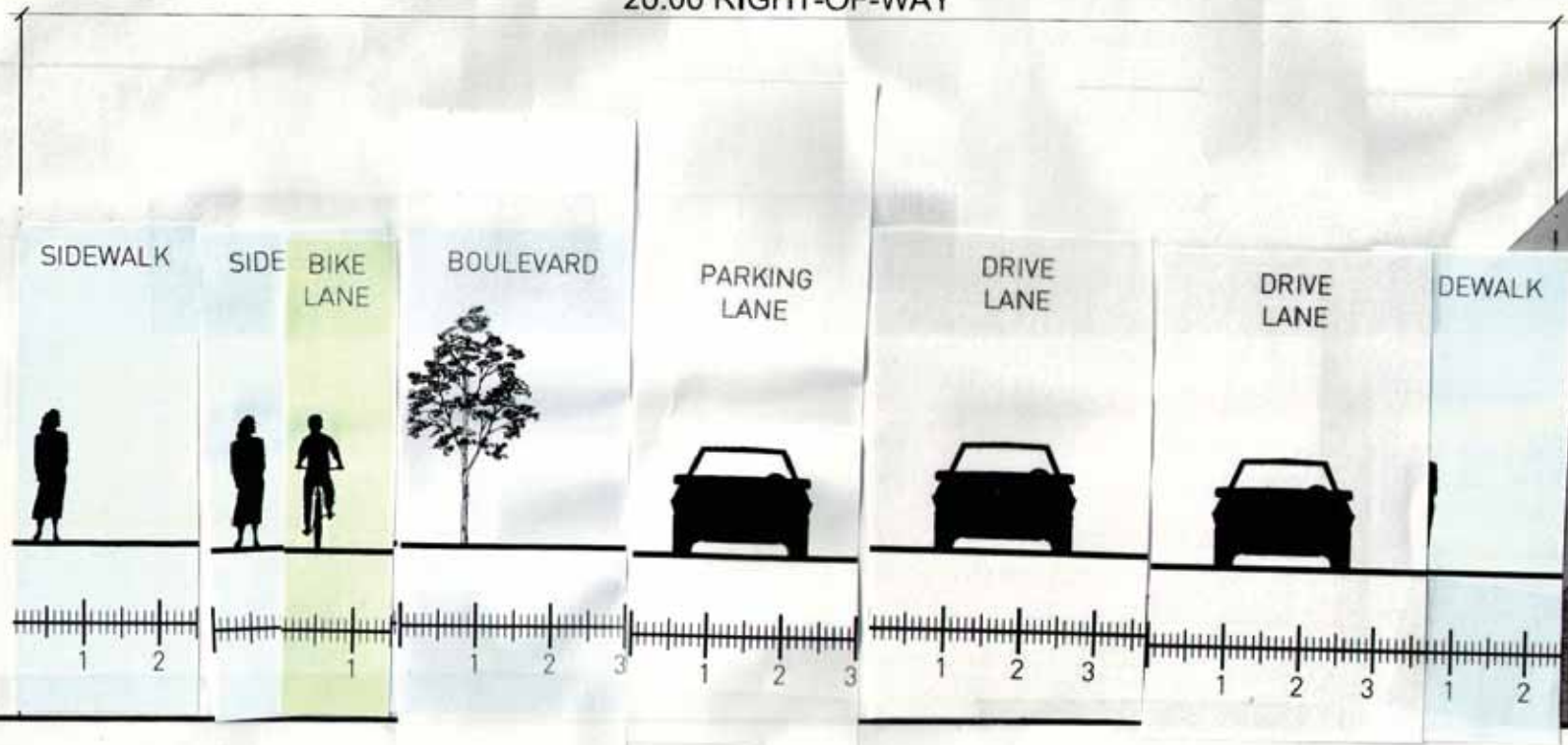
20.00 RIGHT-OF-WAY



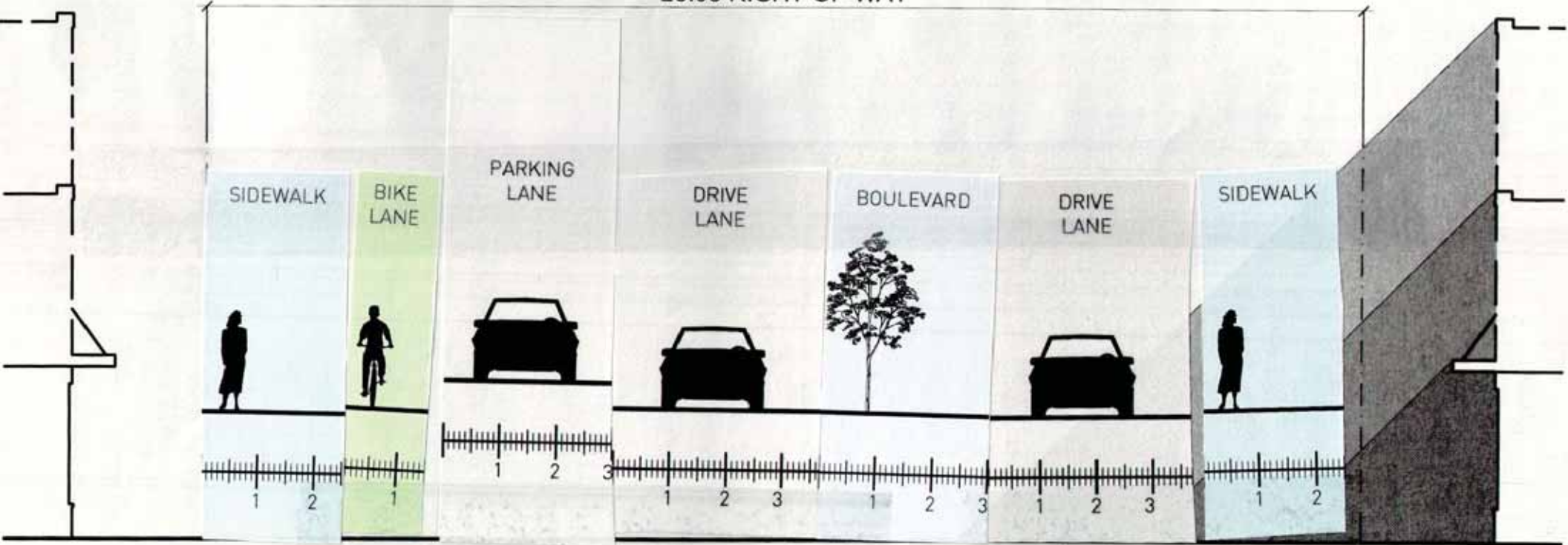
20.00 RIGHT-OF-WAY



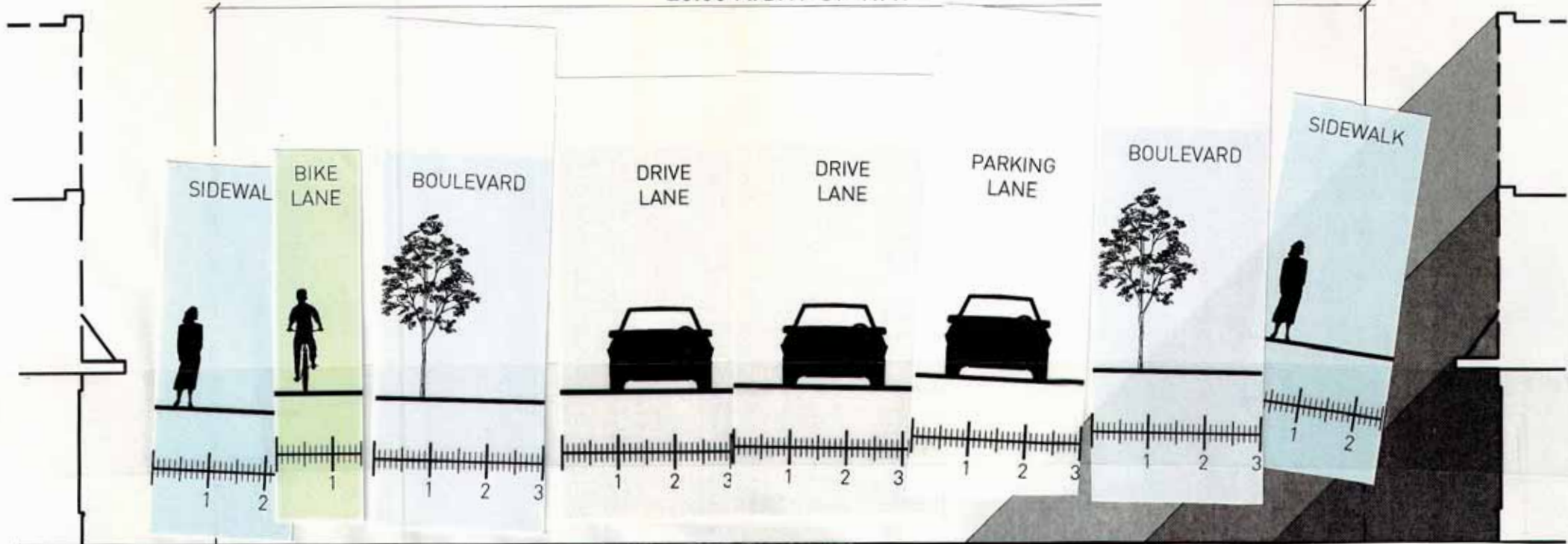
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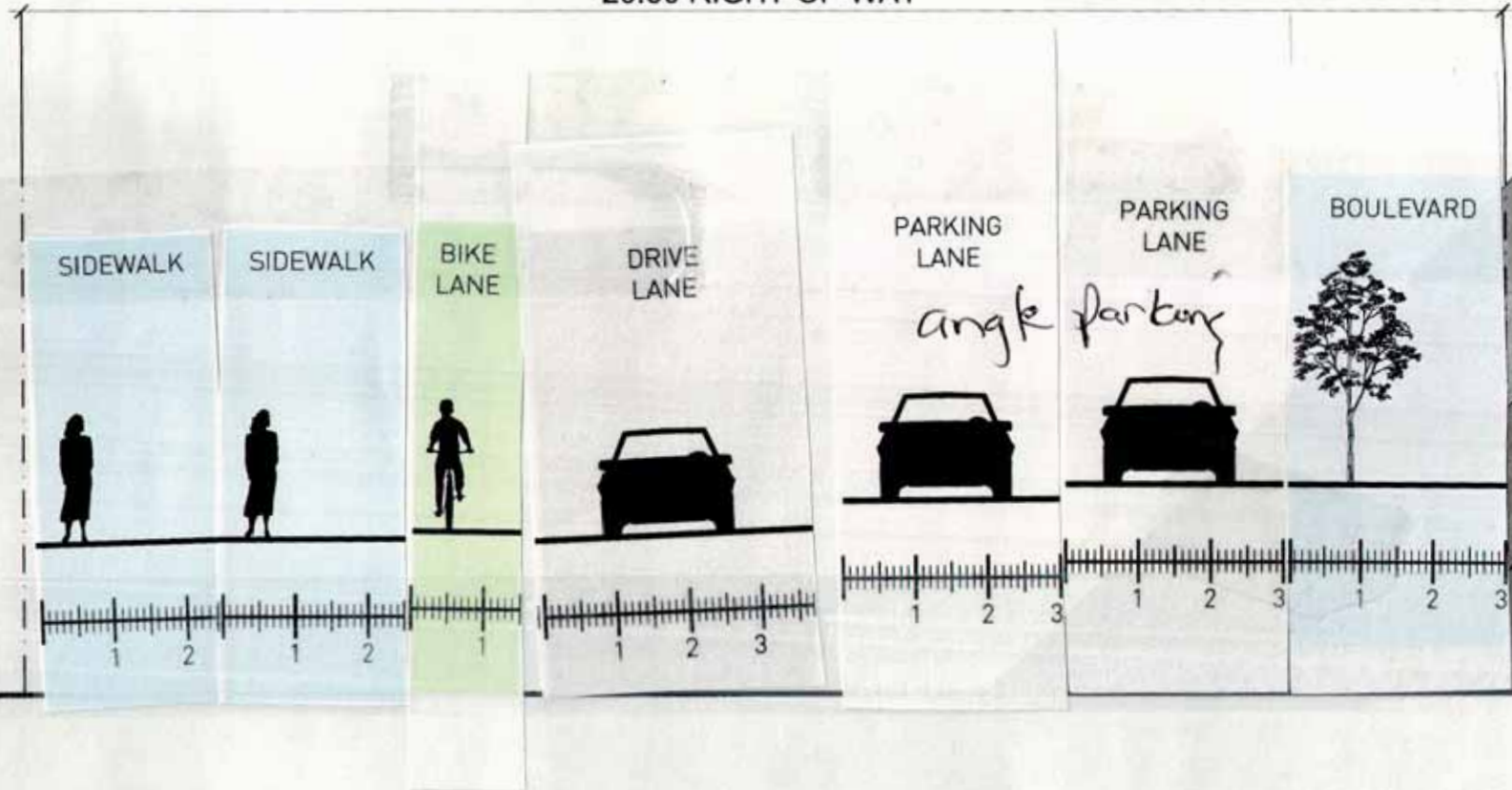
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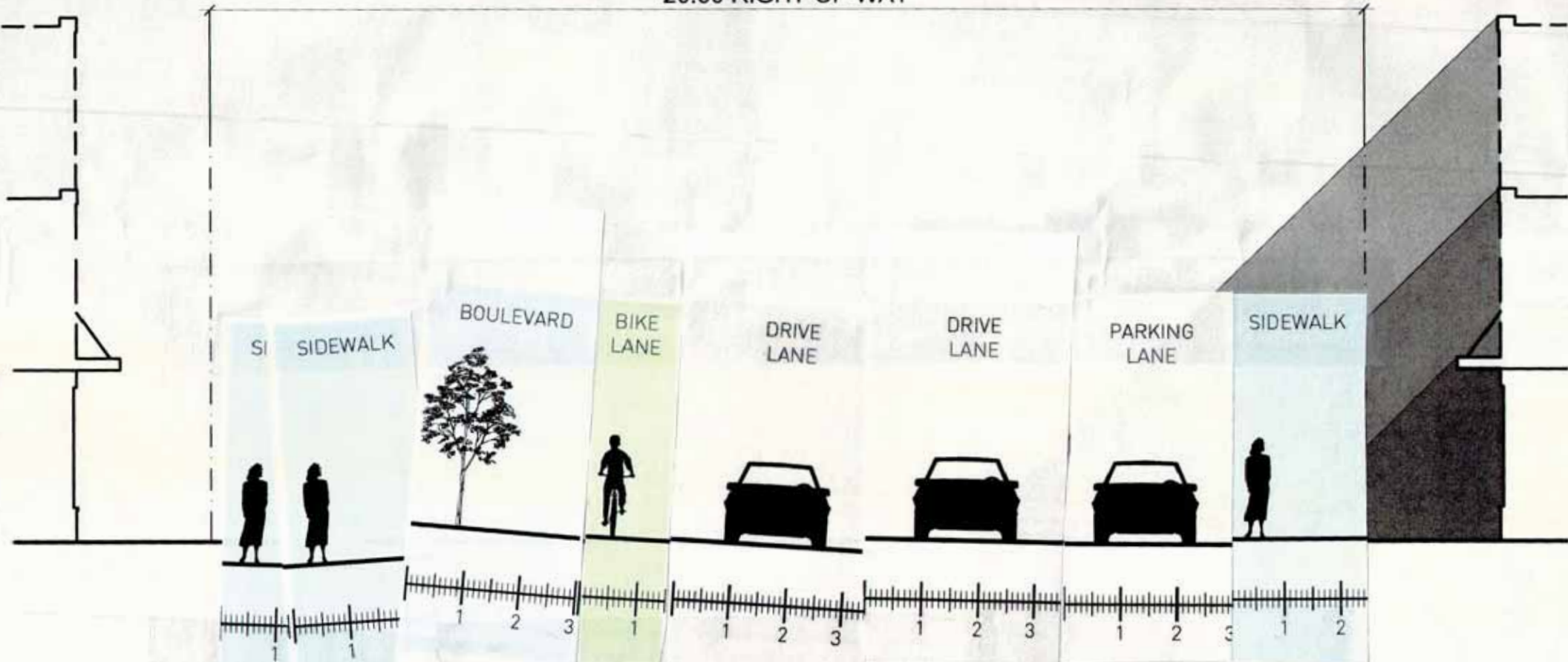
20.00 RIGHT-OF-WAY



20.00 RIGHT-OF-WAY



20.00 RIGHT-OF-WAY



# APPENDIX F

Public Engagement “What We Heard” Report



DOWNTOWN INFRASTRUCTURE ASSESSMENT,  
STREETSCAPE ENHANCEMENT & REHABILITATION PROJECT

**WHAT WE HEARD REPORT**



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2.0	ENGAGEMENT OPPORTUNITIES .....	3
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5.0	MOVING FORWARD.....	10

## 1.0 Introduction

From December 12, 2014 until January 16, 2015, the City of Grande Prairie engaged its residents about their vision for an enhanced downtown streetscape. The feedback heard has been applied to the streetscape enhancement recommendations set out for the City, which will guide councillors' decision-making for the downtown enhancement.

To capture what atmosphere the community would like to see in their downtown, residents were asked the following questions:

- What is your vision for downtown Grande Prairie?
- Which are your priorities for downtown Grande Prairie?
- Which streetscape would you prefer to see in downtown Grande Prairie? Why this streetscape?

From these survey questions, more than 4,500 ideas were generated by more than 1,300 residents. The ideas were collected through an online survey accessed from the City of Grande Prairie website, as well as through paper surveys distributed at the following locations:

- City Hall
- Eastlink
- the Public Library
- Revolution Place
- Muskoseepi Park
- Golden Age Centre
- the Farmers' Market
- Service Centre
- various downtown businesses

### 1.1 Streetscape Options



#### OPTION 1: BASIC STREET ADJUSTMENT

- Reduced lane width from 3.70 metres to 3.50 metres
- Two on-street parking lanes
- Sidewalk width increases from  $\pm 3.80$  metres to  $\pm 4.00$  metres



**OPTION 2: COMPLETE STREET**

- Reduced lane width from 3.70 metres to 3.50 metres
- Separated on-street parking with a different surface material
- Single bike lane on north side
- Trees only on the north side to benefit from greater sun exposure
- Street furniture, planters, and other enhancements on south side



**OPTION 3: SHARED FESTIVAL STREET**

- Reduced lane width from 3.70 metres to 3.50 metres
- Sidewalk width increases from  $\pm 3.80$  metres to  $\pm 4.00$  metres
- Shared space of 4.80 metres for on-street parking, planting, increased pedestrian space, street festivals, etc.
- Bollards provide informal separation between pedestrians and on-street parking

## 2.0 Engagement Opportunities

  
**34**  
DAYS

  
**1,301**  
PARTICIPANTS

  
**4,611**  
IDEAS

- 1 What is your vision for downtown Grande Prairie?
- 2 Which are your priorities for downtown Grande Prairie?
- 3 Which streetscape would you prefer to see in downtown Grande Prairie? Why this streetscape?

PREFERENCES [from most to least occurring]

### VISION

Commercial Business	25.8%
Urban Design	19.5%
Transportation	14.8%
Community	13.4%
Architecture	11.8%
Green Space	5.3%
Other	9.4%

### STREETSCAPE

Urban Design	25.3%
Transportation	24.1%
Community	20.0%
Miscellaneous	11.8%
Commercial Business	6.8%
Green Space	4.5%
Other	7.5%

### PRIORITIES

- 1 It feels safe downtown
- 2 It is convenient to visit downtown
- 3 It is easy to walk downtown

3



Service Centre

+6

40



Eastlink Centre

+61



## LOCATIONS OF HIGHEST PAPER SURVEY PARTICIPATION



## DATES OF HIGHEST ONLINE PARTICIPATION

Muskoseepi  
**+12**

Golden Age Centre  
**+3**

Farmers' Market  
**+28**

Downtown Businesses  
**+16**

Revolution Place  
**+23**

Public Library  
**+65**

City Hall  
**+6**

**23** December 12 / 15

**23** January 16 / 15

**31** December 16 / 14

**41** January 8 / 15

**51** January 13 / 15

**53** January 9 / 15

**186** January 12 / 15

**1,301**

**220**

PAPER RESPONSES

**1,081**

ONLINE RESPONSES

More than once a week

**55.2%**

Once a week

**18.4%**

Once a month

**12.0%**

Rarely / Never

**14.4%**

More than once a week

**31.5%**

Once a week

**19.6%**

Once a month

**28.0%**

Rarely / Never

**20.9%**

# HOW OFTEN DO YOU GO DOWNTOWN?



PARTICIPATION

## 3.0 Theme Overview

The themes and ideas heard in the vision and streetscape preference questions were overall well aligned.

The majority of people (63%) agreed that Option 3: Shared Festival Street is the most desired for downtown Grande Prairie. Key ideas that had equal popularity in the vision and streetscape responses include: gathering spaces (vibrancy), trees, promoting businesses, modern & attractive design, landscaping, improved traffic flow and street furniture.

### Commercial Businesses

Many survey respondents wanted an environment downtown that promotes and provides incentives for a greater variety of offerings, particularly local and small businesses. Evening activity was also emphasized, including longer shopping hours and more restaurants, pubs and cafes.

### Urban Design

Most of the comments in the urban design category focused on creating a clean downtown with a modern and attractive design. Many expressed a desire for a unique downtown identity to ensure it attracts local as well as out-of-town visitors. Many comments suggested more landscaping and patio space.

### Transportation

Comments focused on different modes of transportation and sufficient and convenient parking, with some also emphasizing the importance of the downtown as a pedestrian-friendly destination. Others requested improving the flow of traffic through the downtown and making it accessible for cyclists.

### Community

The top priority in the community category was creating a downtown space that feels safe and comfortable for people to walk around. Also popular were requests for creating a space that attracts people, with more gathering spaces seen as contributing to the vibrancy of the downtown. Festivals in Grande Prairie are highly valued, and many would like to see more opportunities and space to accommodate existing and future events.

### Architecture

Efforts to clean up deteriorated and vacant buildings were a top priority for architecture feedback. Other comments focused on having nice shop facades and encouraging new development, especially residential development to promote people living downtown.

### Green space

Trees were commonly referenced, both in terms of adding more trees as well as ensuring they have a healthy environment in which to grow. More green spaces and parks were mentioned frequently, and many respondents suggested adding more lighting and increasing the decorative and feature lighting, especially in winter months.

### Other

Other comments received in the survey included maintenance and snow clearing as well as creating a design that is functional, flexible and cost effective.

An aerial photograph of downtown Grande Prairie, showing a mix of commercial buildings, parking lots, and green spaces. The image is used as a background for the report sections.

## VISION HIGHLIGHTS

1. The Transportation and Commercial Business themes generated the most variety of ideas.
  - a. Transportation ideas spanned across sub-themes, from bike/pedestrian infrastructure, transit and sufficient parking to accessibility, timing of lights and improved traffic flow.
  - b. Commercial Business also had a multitude of popular sub-themes beyond the top 3 including cultural/art uses, more local shops, entertainment/nightlife, promoting business, expanding the Farmers' Market, office space and more.
2. Ideas categorized in the "Other" sub-theme, of the Community theme, included comments using language such as friendly, inviting, having a good feel/atmosphere and promoting community involvement.
3. About 55% of those who responded to the survey visit downtown Grande Prairie at least once a week.
4. Although density was not a hot topic in participant responses, 19 times more people spoke to wanting high-rise development than those who spoke in opposition to it.

"I think downtown should be a friendly place that everyone feels safe to walk around and go shopping."

## VISION TAKEAWAYS

1. Quite a number of people spoke to parking options in the downtown while an equally large group asked for more pedestrian and bike friendly infrastructure.
2. There were a significant number of responses that asked for replication of quaint streets/districts that can be found elsewhere, referring to places like Victoria, B.C., Amsterdam and other European cities, while others iterated the importance of Grande Prairie as a thoroughfare for Canada's transportation industry.

"Clean, good shopping, more parking, and no old and visually unappealing buildings being left to rot."

"To be a clean safe place for all citizens. Have the stones and gravel cleaned along the gutter and against the buildings. All old repair plugs etc that stick out above the benches and sidewalks."



## STREETSCAPE HIGHLIGHTS

1. The Urban Design theme had many popular sub-themes beyond the top 3 including landscaping, street furnishing, and winter design.
2. All of the themes encompassed the majority of responses in 3 sub-themes, Urban Design excluded.
3. Sub-themes mentioned by at least 10 participants include: snow clearing, family-oriented, cultural / art uses, expanded Farmers' Market, functional, flexible, accessible (Transportation) and maintaining street widths.
4. Ideas categorized in the "Other" sub-theme, under the Community theme, included comments such as welcoming, promote involvement, and support community.

"Covered sidewalks! Revamp older buildings. Give it a new modern fresh look and style. More types of stores that draw in people. Maybe even a great Cafe."

"To attract more culture, festive, and outdoor gathering places for GP citizens of all ages."

"Build a community downtown—trendy coffee houses, bistros, music, walking, biking, a place to walk your dog, and meet friends for brunch—unique small business need an environment they can survive and thrive."

## STREETSCAPE TAKEAWAYS

1. Ideas regarding Urban Design do come with some disagreement as "Landscaping" and "Street Furnishing" seem to conflict with some respondents' perception of "Winter Design."
2. An equal number of people suggested widening and improving sidewalks as those who said not to widen them.
3. Overall, participants seem to desire the changes that will make downtown Grande Prairie a more vibrant place, but 43 people explicitly stated it must be cost effective. Taxes increasing as a result of redevelopment are not supported by this group.
4. Similar to the "vision" feedback, there was some tension in the Transportation theme, where about 90 participants want to see sufficient parking and another 90 want to see improvement in Pedestrian infrastructure

## 4.0 How Public Feedback Impacted Design

Input from the general public, the Downtown Association, and the Grande Prairie City Council had significant impact on the Streetscape Design Recommendations. The following overview provides examples of ways the design evolved in specific theme areas, based on the feedback received.

### Identity

To enhance an active and vibrant downtown destination that embraces the culture of Grande Prairie and contributes to the identity of the downtown:

- Includes gathering spaces (enhanced intersections, mid-block bump-outs) where events can be located, or for extended patio space from businesses
- Incorporates the shared festival street along 101 Avenue to allow events and festivals to spill out into the street throughout the year (including the Farmers' Market, the Centre For Creative Arts and the future cultural development along the Montrose site)
- Provides space for art and cultural uses including public art, nodes that can be used as stages, and flexible spaces that can transform and accommodate a variety of events

### Mobility

To support the complete streets model, emphasizing pedestrian accessibility/comfort, transit-supportive design, convenient parking, and opportunities for cycling infrastructure:

- Preserves on-street parking
- Ensures pedestrian comfort with wider sidewalks, frequent crossings, and a protective street furniture zone
- Focuses on accessibility with textured paving at crossing curb-cuts to increase safety and provide a sensory cue

### Safety

To achieve safety for pedestrians, vehicles, and cyclists throughout the downtown enhancement area:

- Respects the principles of Crime Prevention Through Environmental Design
- Enhances intersections to increase pedestrian visibility
- Incorporates mid-block crossings to calm traffic

### **Urban Design**

To establish a cohesive design approach with coordinated and complementary streetscape elements to contribute to the downtown identity:

- Focuses on a modern, attractive, and consistent design scheme throughout the downtown
- Includes an evening lighting scheme for both vehicles and pedestrians to create a bright and safe downtown

### **Economy**

To enhance the economic vitality of the downtown by attracting a mix of businesses that serve a wide variety of people:

- Establishes enhanced streetscape conditions that attract small, boutique businesses
- Improves the opportunity for night and weekend activities in the downtown
- Promotes downtown business via coordinated signage and wayfinding features

### **Landscape**

To support sustainable landscape treatments to complement the character of downtown streets and support their distinctive identity:

- Incorporates appropriate species of trees and/or plants that provide seasonal interest
- Proposes planting methods that ensure healthy urban tree growth
- Provides opportunities for landscaping, trees, and planters

### **Architecture**

To promote high-quality architecture and redevelopment opportunities:

- Establishes enhanced streetscape conditions to help attract high-quality redevelopment

### **Seasonality**

To incorporate flexible design solutions to accommodate a range of functions and activities that can vary throughout the seasons:

- Encourages flexible and dynamic streetscapes and furnishings that seamlessly support year-round community events and ornamentation
- Accommodates winter conditions, including the incorporation of snow storage areas, as well as vertical design elements that distinguish the pedestrian space from the vehicle space when there is snow on the ground

### **Maintenance**

To ensure ease of year-round maintenance through the use of appropriate streetscape materials:

- Uses sustainable materials and construction best practices to decrease maintenance frequency and cost

## 5.0 Moving Forward

Based on the information collected from public engagement in phase 1, it is clear that the most desired concept for Grande Prairie is Option 3 — Shared Festival Street. The feedback supplementing the preferred features of Option 3 mostly spoke to Transportation, Urban Design and Community. Similarly, the feedback supporting participants' visions also spoke to Transportation and Urban Design, with the addition of Commercial Businesses.

It should be recognized that there are participants who want to see little to no change and it will require extreme sensitivity:

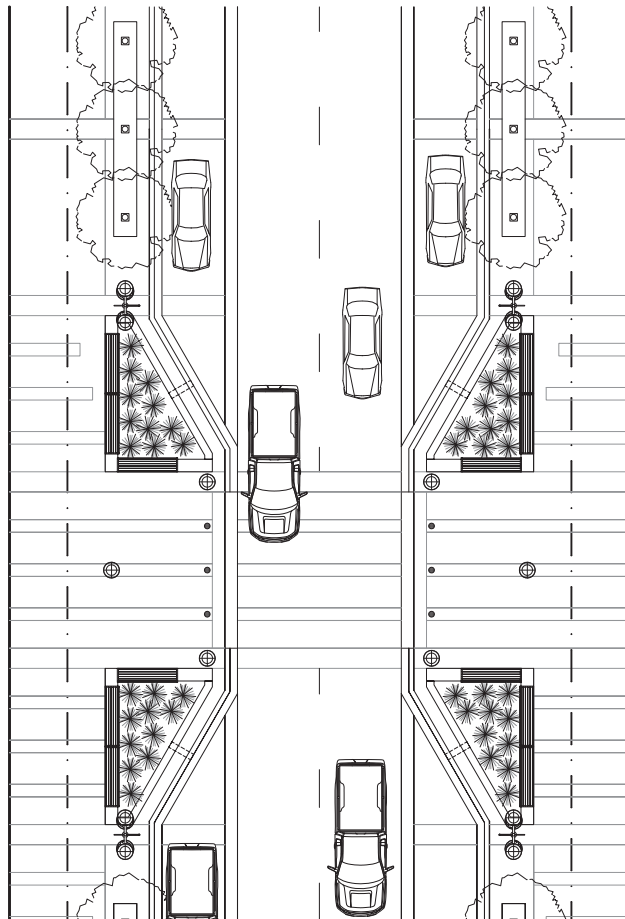
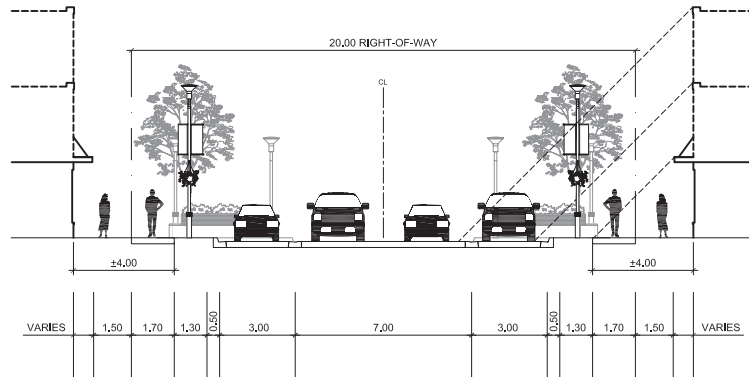
- Parking options vs. more pedestrian and bike friendly infrastructure
- Quaint streets/district precedents vs. status-quo thoroughfare for transportation industry
- Conflict in design principles — beautification vs. winter city
- Widening and improving sidewalks vs. not widening or improving sidewalks
- Cost — effect on taxes



# APPENDIX G

Proposed Street Hierarchy ROW Drawings

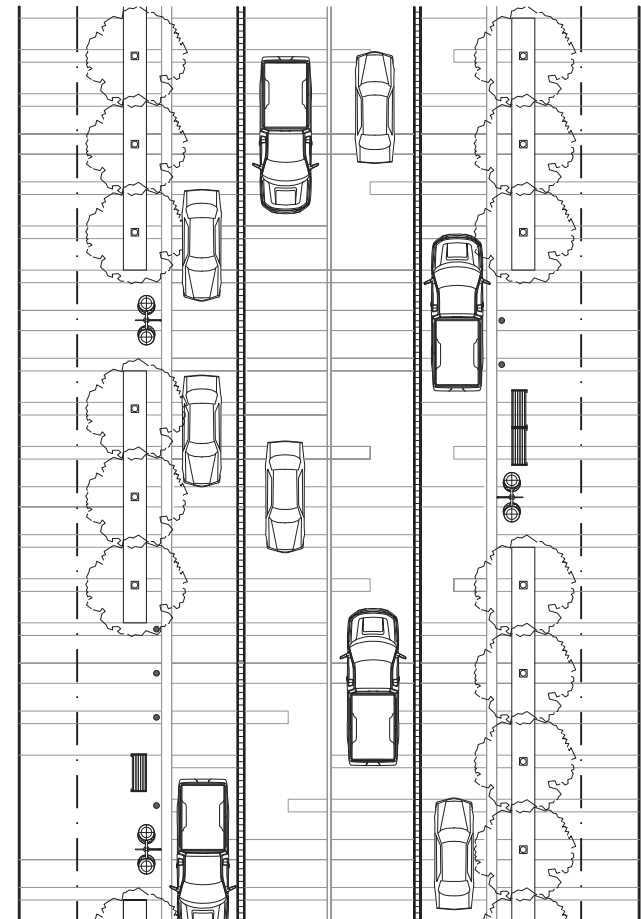
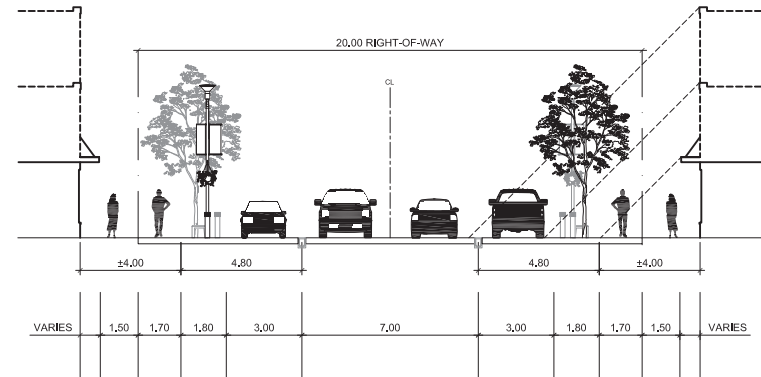
# Urban Avenue



100th Avenue



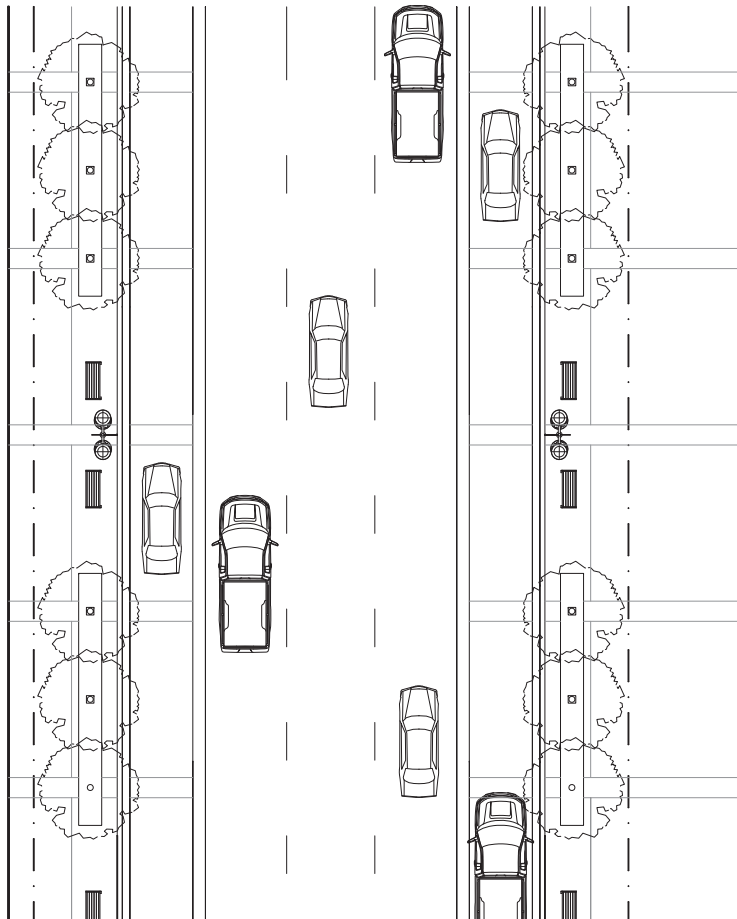
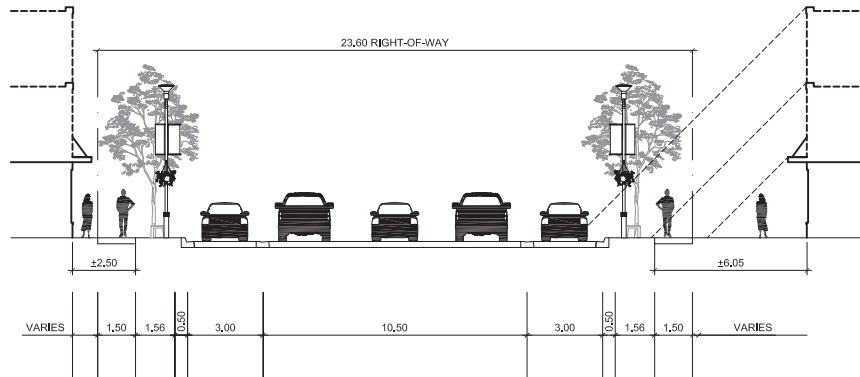
# Shared Avenue



101st Avenue



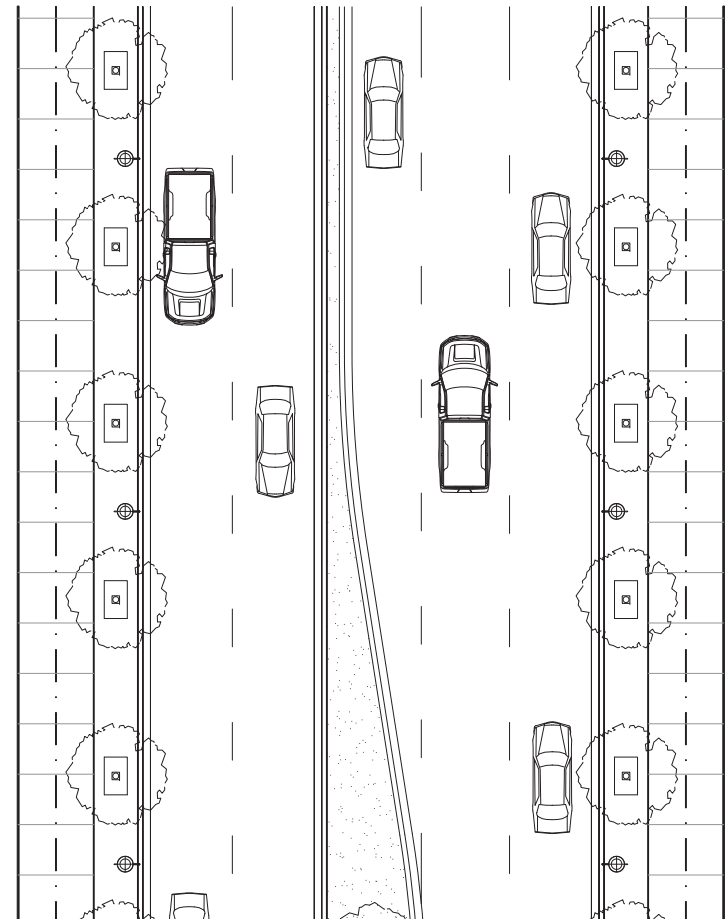
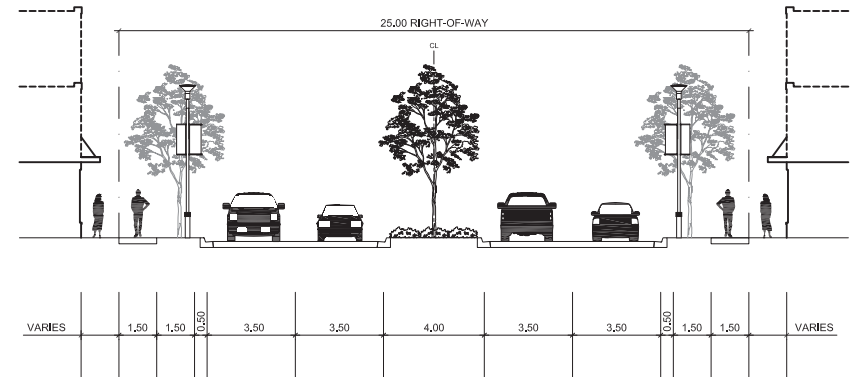
## Transitional Avenue



99th Avenue



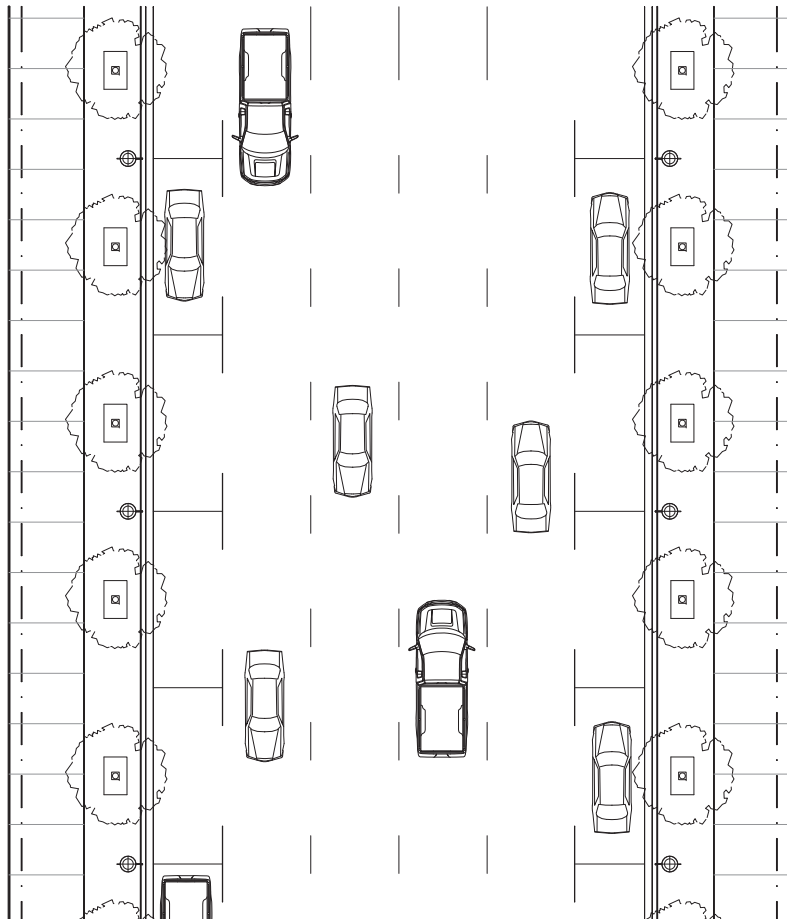
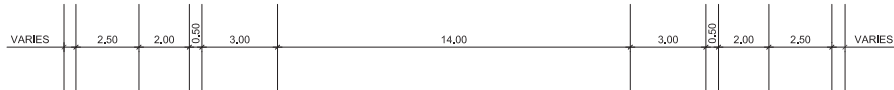
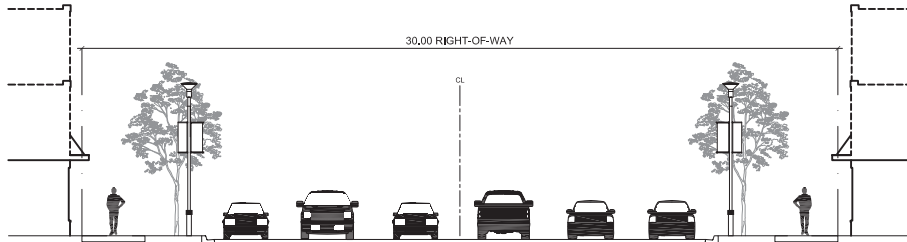
## Urban Arterial Street



100th & 98th Streets  
(south of 101 ave / north of 99 ave)



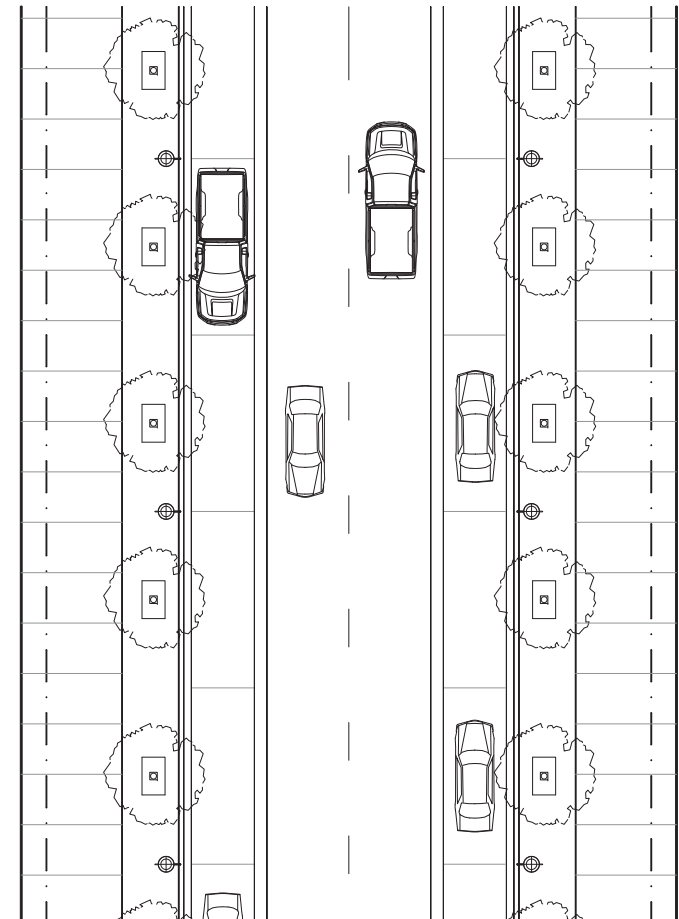
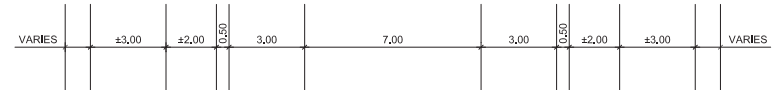
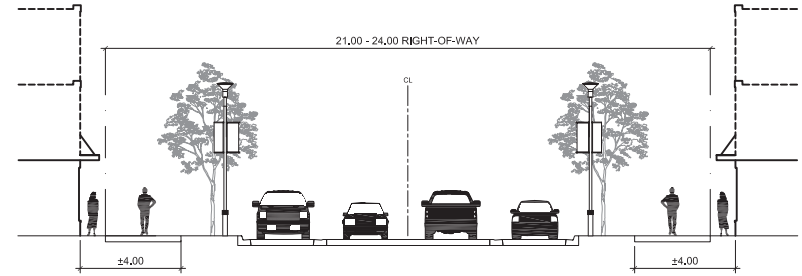
## Urban Collector Street



102nd Street  
(south of 101 ave / north of 99 ave)

0 50 150m

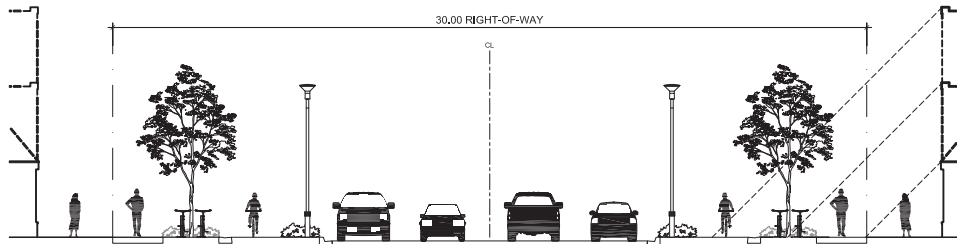
## Urban Connector Street



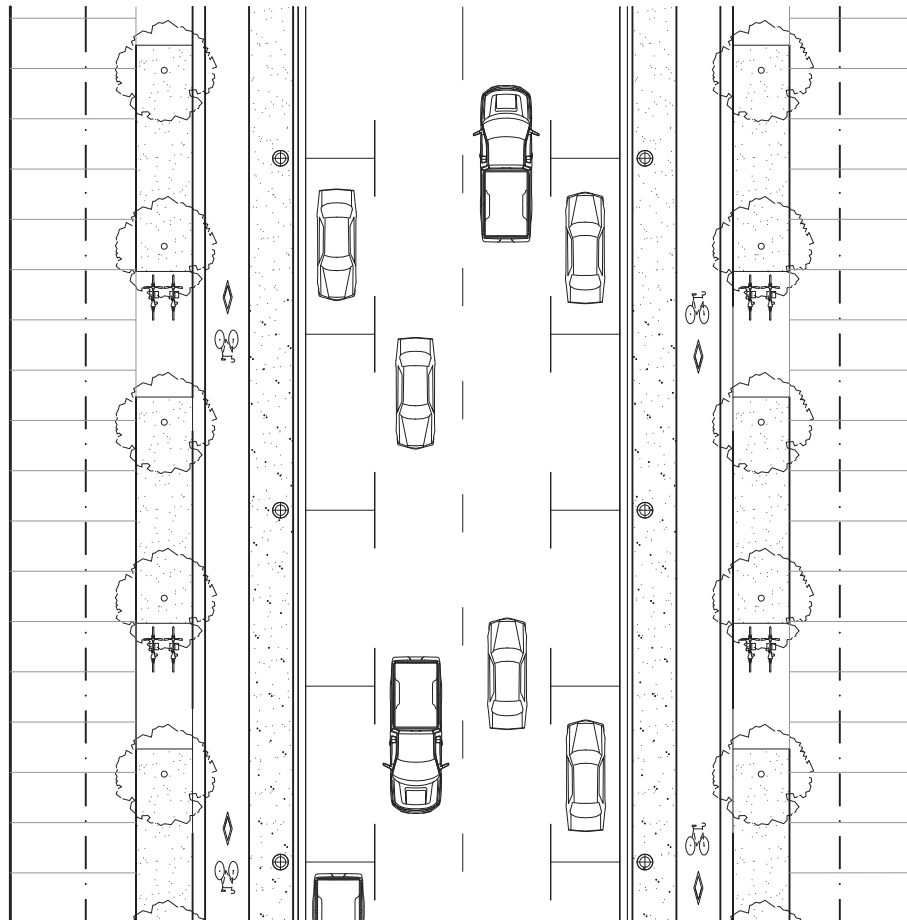
99th & 101st Streets  
(south of 101 ave / north of 99 ave)

0 50 150m

## Residential Avenue



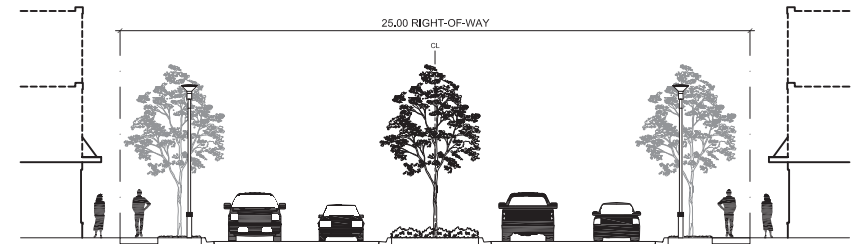
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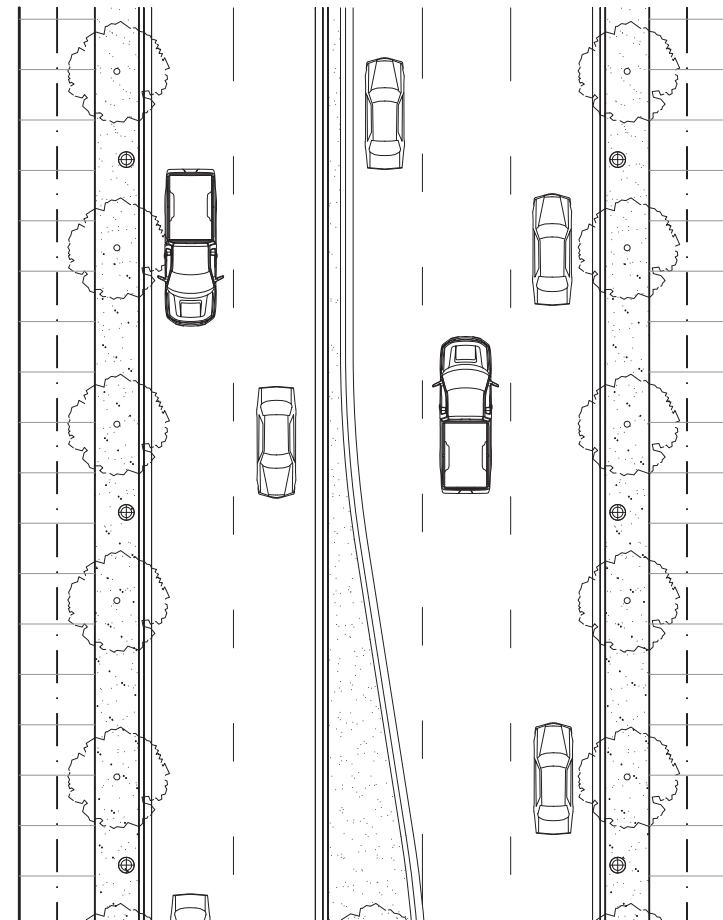
102nd Avenue



## Standard Arterial Street



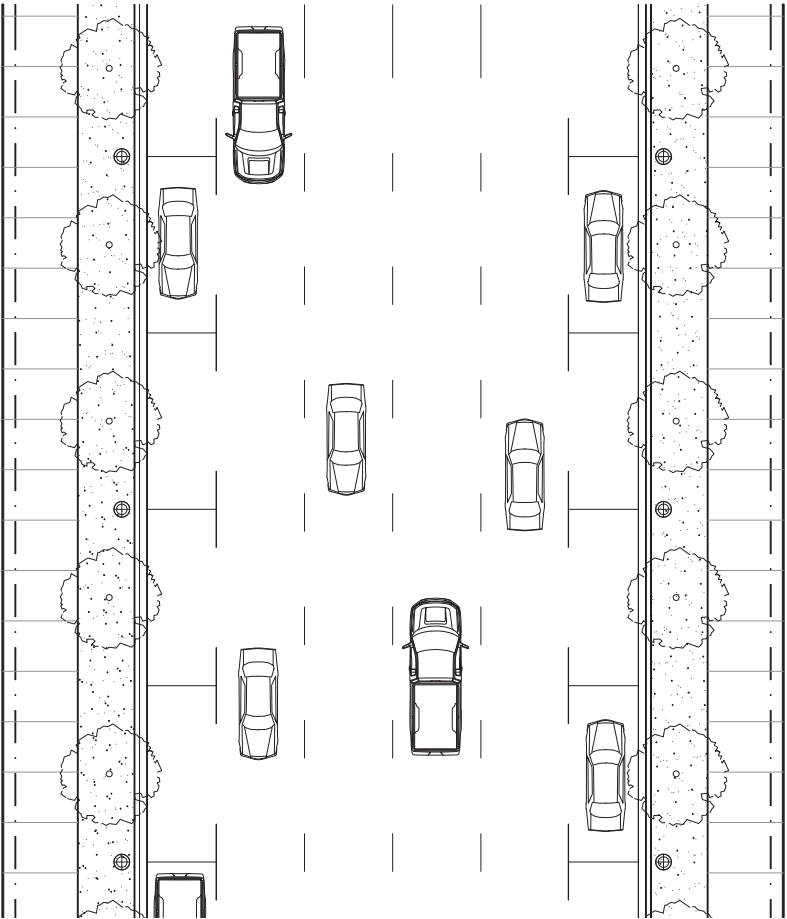
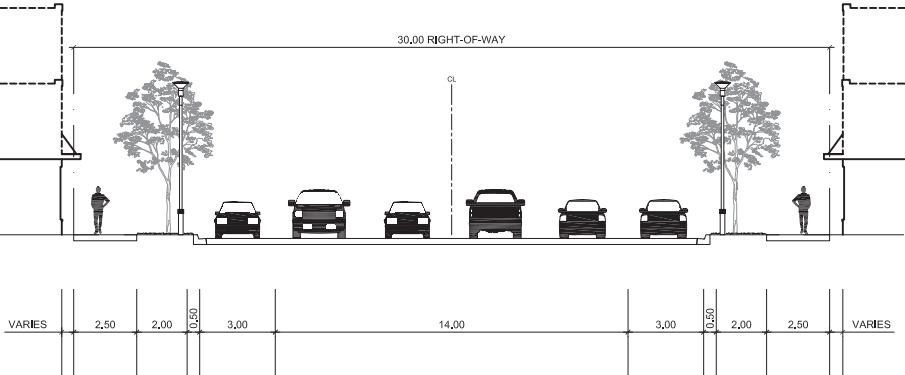
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100th & 98th Streets  
(north of 101 ave / south of 99 ave)



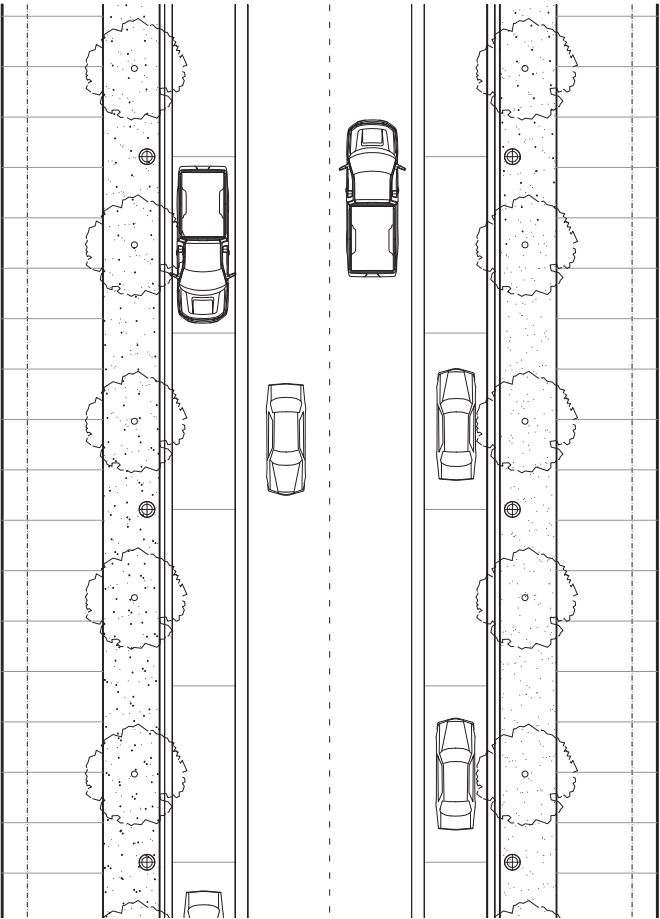
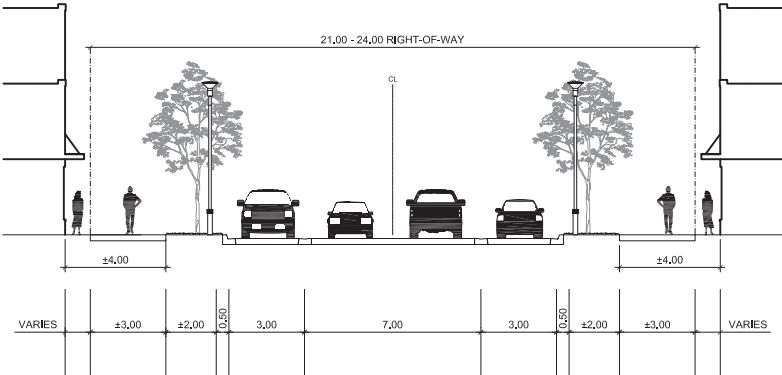
Standard Collector Street



102nd Street  
(north of 101 ave / south of 99 ave)



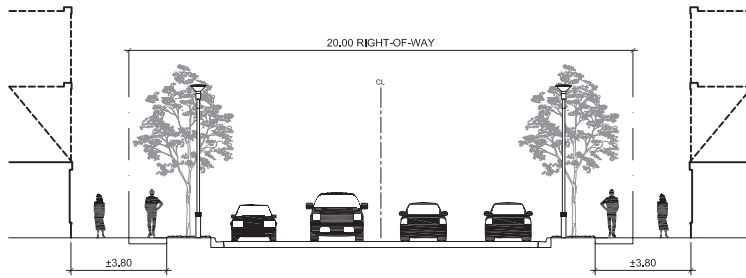
Standard Connector Street



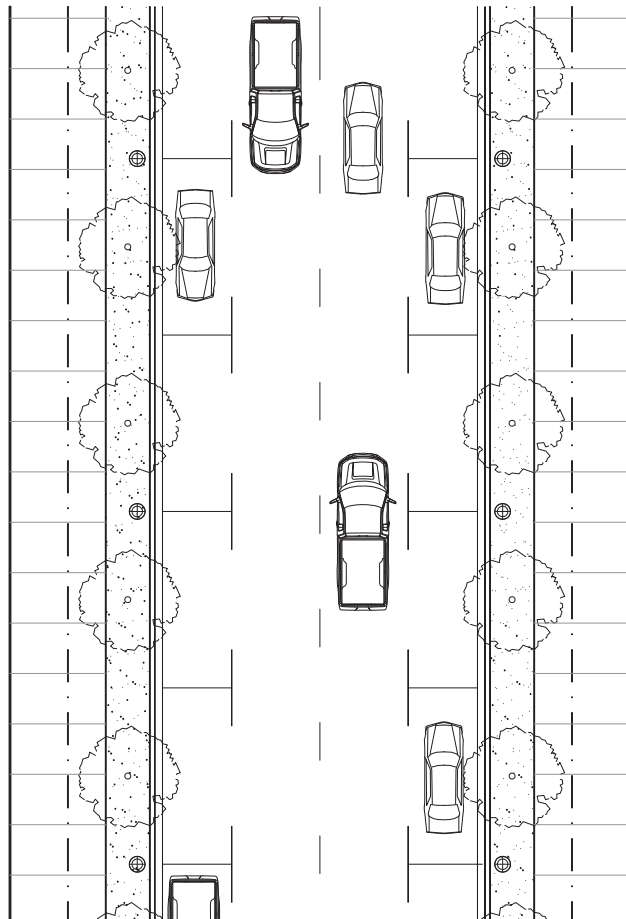
99th & 101st Streets  
(north of 101 ave / south of 99 ave)



# Basic Local Upgrade



VARIES	1,50	1,50	1,50	0,50	3,00	7,00	3,00	0,50	1,50	1,50	1,50	VARIES
--------	------	------	------	------	------	------	------	------	------	------	------	--------



98th, 97th & Montrose Avenues;  
97A, 97th & 102nd Streets

